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SPECIAL FEATURES IN THIS ISSUE

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### **NEW PUBLICATIONS OF THE BUREAU OF LABOR STATISTICS**

Proceedings of the 16th annual meeting of the International Association of Industrial Accident Boards and Commissions, Buffalo, N. Y., October 8-11, 1929. Bulletin No. 511.

Code for identification of gas-mask canisters. Bulletin No. 512.

Wages and hours of labor in the iron and steel industry, 1929. Bulletin No. 513.

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Hours and earnings in bituminous coal mining, 1929. Bulletin No. 516.

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**UNITED STATES DEPARTMENT OF LABOR**

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**BUREAU OF LABOR STATISTICS**

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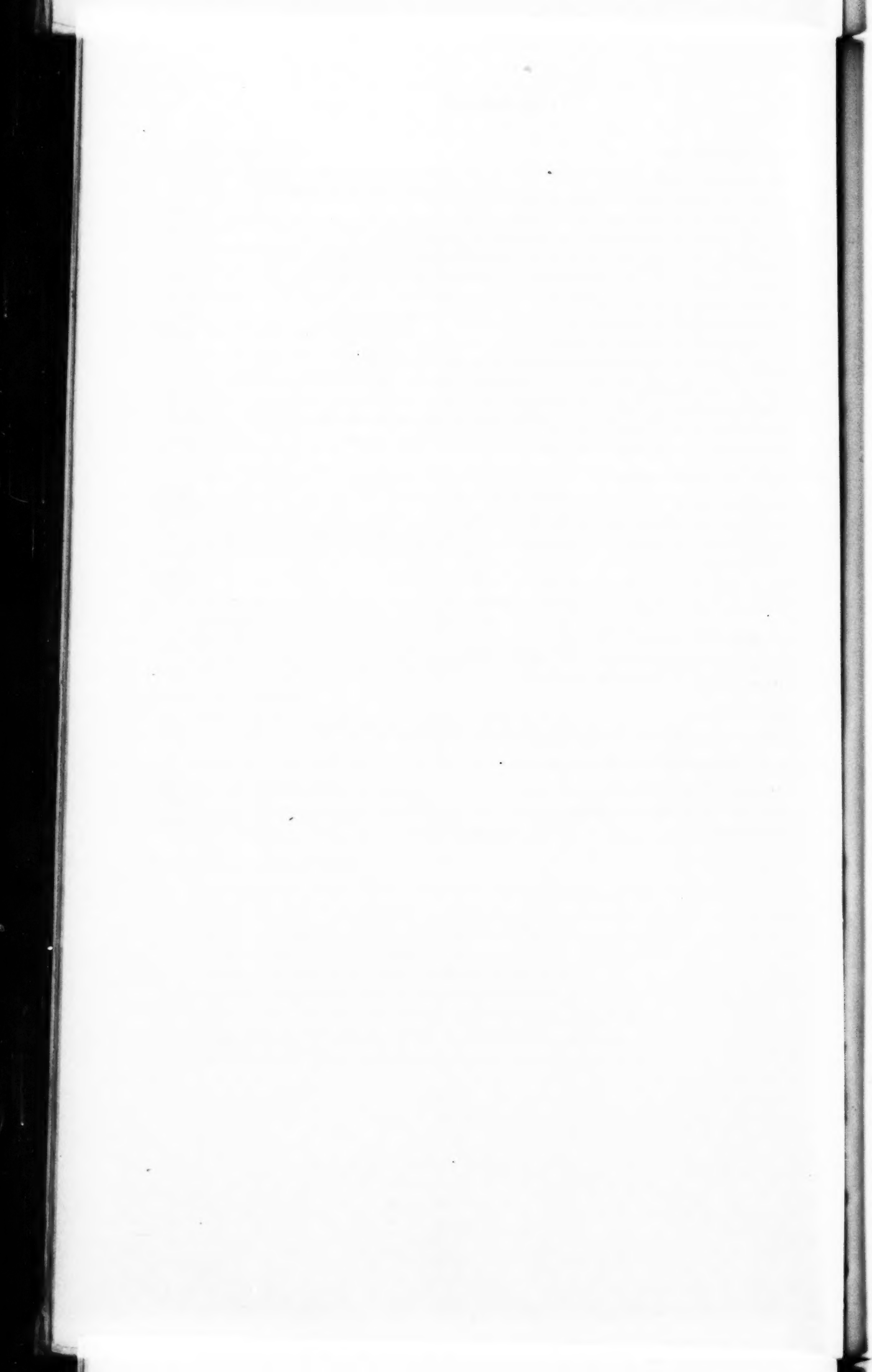
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### This Issue in Brief

*Despite the civil wars in China, industrialization has increased and the labor movement has expanded, according to a special article by Ta Chen. This is explained in part by the country's high degree of social stability, which comes from an ancient civilization and age-long traditions. The people themselves have generally taken the initiative in commerce and industry, with little interference by the Government. Moreover, civil war in China is frequently a conflict between military factions and does not directly involve the bulk of the people, who carry on their daily work almost as usual. Page 1.*

*The seriousness of the problem of seasonal unemployment even in good business years is indicated by a study of the monthly fluctuations of employment in automobile manufacturing and related industries in Ohio for the years 1923 to 1928, inclusive. It was found, for instance, that in every one of these six years the number of employees in the month of maximum employment was over 11,000 more than in the month of minimum employment and in one year this number was almost 24,000. Page 40.*

*Studies of unemployment in Philadelphia and in Cincinnati, made in the spring of 1930 by the same agencies which made similar studies in the spring of 1929, indicate the extent of the increase in unemployment between these two periods. In Philadelphia it was found that, based on a fairly large sample, 11.7 per cent of the employable persons were unemployed because of lack of work in April, 1930, as against 7.8 per cent in April, 1929. In Cincinnati corresponding percentages were 8.2 in May, 1930, as against less than 5 in May, 1929. Page 35.*

*A study of the employment trend of female workers as distinct from that of male workers shows some interesting differences between the sexes. A recent report of the United States Women's Bureau presents a careful analysis of this subject, based upon Ohio statistics. Page 19.*

*A decrease in earnings and a reduction in working hours in the boot and shoe industry are shown by the latest biennial survey of wages and hours in that industry, made early in 1930 by the Bureau of Labor Statistics. Average hourly earnings were 51 cents in 1930 as compared with 53 cents in 1928; average full-time earnings per week were \$24.94 in 1930 and \$26.02 in 1928. Full-time weekly hours decreased from 49.1 in 1928 to 48.9 in 1930. Page 152.*

*The development of many new uses for asbestos has created a new occupational risk and added a new form of chronic pulmonary fibrosis to the list of industrial lung affections. The most characteristic feature of the disease is the presence of yellow foreign bodies in the lungs and the sputum of those affected. Physical examinations of 363 workers in England who were exposed to asbestos dust showed a high incidence of fibrosis, the study also showing that the disease does not develop until there has been a considerable period of exposure and that disablement is even more delayed than in the case of silicosis. Page 74.*

*Accident rates in the coke-oven industry were lower in 1928 than in any previous year, according to the report of the United States Bureau of Mines covering that industry for 1928, the death rate being 0.78 and the injury rate 46.61 per 1,000 300-day workers. On the other hand, the report of that bureau on coal-mine fatalities in 1928 shows that the death rate from accidents in coal mines was 5 per cent higher in 1928 than in 1927, the rate for 1928 being 4.64 per 1,000 300-day workers as compared with 4.43 for 1927. Pages 80 and 83.*

*Continued progress in the community recreation movement is shown in a report for the year 1929. The number of cities of more than 50,000 inhabitants having recreation facilities and programs had increased from 872 in the previous year to 945 in 1929, while there was a decided increase in the number of both trained and volunteer workers. The salaries of the employed leaders were reported for the first time, the amount so paid in 657 cities aggregating approximately \$7,060,000. Page 73.*

*Most of the larger consumers' cooperative societies in the United States are affiliated to the Cooperative League of the U. S. A. This league was started in 1915 and is now a federation of three district leagues, each of which has local autonomy. In regions where there is no district league as yet, the local societies affiliate directly to the national league instead of doing so through the district league. In 1928 the 116 store and housing societies in membership with the National League had a combined membership of more than 39,000, sales of about \$17,500,000, and a net gain of more than \$500,000. The 6 credit societies had an aggregate membership of 3,723, savings deposits of some \$2,200,000, and a net gain of nearly \$61,000. The 4 insurance societies had an aggregate membership of 81,680, a gross income of \$1,080,000, and a net gain of about \$119,000. Page 116.*

*Average earnings in the German automobile industry are, for the great majority of the skilled workers, between 24 and 36 cents per hour, and for the great majority of the unskilled workers, between 18 and 24 cents, according to a special article (p. 29) which also gives a general picture of labor conditions in this industry.*

*Family-allowance systems continue to expand in Belgium and France, approximately 4,000,000 persons being employed by establishments and services paying these allowances in the latter country alone. In the civil service of the Commonwealth of Australia grants have been made for children since 1920, while for several years New South Wales and New Zealand have been experimenting with child-endowment legislation. A summary of recent developments in the family-allowance movement is given on page 62.*



# MONTHLY LABOR REVIEW

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## Labor in China During the Civil Wars

By TA CHEN, VISITING PROFESSOR TO THE UNIVERSITY OF HAWAII, HONOLULU

**P**OLITICALLY China is undergoing a stupendous transformation. Since the revolution in 1911, the country has been subjected to frequent civil wars and military conflicts which have resulted in great chaos. Although the monarchy has been overthrown and the Republic established, there are many hindrances to democracy. Among them are ignorance, intrigue, selfishness, economic pressure, and a lack of public opinion. The sporadic efforts in recent years to remove some of these hindrances have constituted an important source of social unrest. China is still in a turmoil which overshadows all measures of reform and reconstruction. Yet reconstruction is, in a way, going on side by side with political changes. Moreover, China enjoys a high degree of social stability which comes from an old civilization and age-long traditions, and which makes it possible for commerce and industry to prosper in spite of civil war and political upheavals.

Civil war, of course, greatly impedes commerce and industry, but they suffer relatively less in a war-ridden China than they would in a western country under such a conflict. In fact, the adverse effect of political unrest upon socio-economic conditions in China is considerably less than the outside world commonly surmises. This is due to three major factors. In the first place, from ancient times the Chinese people have generally taken the initiative in managing commerce and industry, as under the guild system. The Government has usually adopted a laissez-faire attitude, and although in recent years it has manifested an increasing interest in commerce and industry, the people still retain considerable freedom in such matters. This freedom is strongly expressed in the growth of modern industry, in the development of the labor movement, and in the organization of farmers' leagues.

Secondly, the Kuomintang<sup>1</sup> and the Nationalist Government have definitely pledged themselves to improve the economic and social life of the common people. Although no startling achievement is yet in sight, certain worthwhile attempts have been made. If greater stability can be obtained throughout the nation, orderly progress may be expected in the course of time.

<sup>1</sup>"The only political party legal in China supports Dr. Sun Yat-sen's three people's principles, i. e., nationalism, democracy, people's livelihood." (Political Handbook of the World, 1929. Yale University Press, New Haven.)

Thirdly, civil war in China is frequently a conflict between two opposing military factions and does not directly involve the bulk of the people. The masses carry on their daily work almost as usual. Factories, workshops, and business houses are generally uninterrupted unless they are situated in the war zone. Of course, they will be indirectly affected by the war. These factors partially explain the simultaneous changes in the economic and social situation along with the political vicissitudes. It is the purpose of this paper to outline some of these changes and as far as possible offer explanations.

### Disintegration of the Guild System

A SIGNIFICANT tendency in the Chinese labor situation to-day is the gradual disintegration of the guild system and the slow development of modern labor unions.

The Chinese guild system included, roughly, three classes of organizations: (1) The district guild (*Huei Kuan*), organized on a community basis and having a predominantly social function; (2) the hong merchant (*Coo Hong*), organized on an occupational basis and having chiefly a commercial function; and (3) the craft guild (*Kung Son*), organized on a trade or craft basis and having mainly a labor function.

The membership of the craft guild was usually made up of masters and journeymen of the same trade, but in a few cases included apprentices also. According to social custom, when a youngster of a poor family wanted to learn a craft, he ordinarily became an apprentice to a master and received from him food, lodging, and trade instruction. The novice was paid no wages, but was given a modest sum of money at the end of the year. When his apprenticeship expired, the young man became a journeyman who was paid a regular wage, but who frequently worked in the master's shop to gain further experience in the trade. After a few years as a journeyman he became a master himself, opening his own establishment, and taking in apprentices. This was the system under which handicrafts in old China flourished, and under which many handicrafts in China to-day are being carried on.

As already stated, however, in certain sections of China, the guild system is disintegrating. Outstanding among the fundamental causes of this disintegration is the fact that the craft guild is essentially a handicraft organization. Under it the master was a most powerful person, and frequently an autocrat. His word was law and his will prevailed. This made it very difficult to declare a strike under the guild system. Traveling in China in the fall of 1929, the writer had a conference with about 25 guild leaders in Foochow, an important city for handicrafts. All of these leaders expressed their preference for the modern labor union as compared with the guild, because the union operates on a much more democratic basis, is composed of employees only, and is in China increasingly being organized on an industry rather than a craft basis.

The second cause of the disintegration of the guild is the influence of the Kuomintang's political propaganda. From 1921 Dr. Sun Yat-sen, in his speeches to the laborers and farmers in South China repeatedly urged them to join the revolutionary party in order to carry to completion the "people's revolution" and also to improve

their economic and social status. With equal emphasis he urged the city laborers to reorganize the antiquated guild system into the modern labor union. Many of the workers have accepted his advice and have begun to reorganize the guilds into unions. When visiting Canton in 1925, the writer noticed the gradual change from guilds to unions in the city and its environs. In March, 1927, the city government made a survey of the important unions there, finding that of a total of 180 active unions then functioning, 72 had been reorganized from guilds. In October, 1929, when the writer revisited Canton, he found hardly any important guilds of the old type. The decline of the guild has been most rapid in that city, due in no small degree to the effective propaganda of the Kuomintang, as Canton is the center of party activities in South China. In other cities the decline of the guild is also discernible, although the process is much slower.

Thirdly, the superiority of the modern labor union is also seen in its power of collective bargaining. In a recent survey of over 40 unions in Peiping made under the direction of the writer, it was found that wages have been generally raised among the members since the organization of their unions. Under the guild the question of wage fixing was usually decided upon at its annual meeting and the guild wage thus arranged was enforced throughout the year, such decision being renewable in the year following. As the cost of living in Peiping is rising rather rapidly, this arrangement is not generally satisfactory to the working classes.

The structure of some of the craft guilds in a way facilitates their disintegration. Although the membership of the craft guild is usually open to both employers and employees, there is some variation in procedure from guild to guild. In some cases the masters and journeymen of the guild frequently hold separate meetings. If questions concerning masters are to be discussed by the guild, only the masters attend the meeting; if only the interests of journeymen are affected, they alone are the conferees. In another type of guild, masters and journeymen of the same trade have separate organizations. These variations tend to hasten the breaking up of the traditional type of the craft guild by the appreciable reduction of the master's power and the insistence on the differentiation of his economic interests from those of his journeymen.

The decline of the craft guild is especially noticeable in such commercial and industrial centers as Canton, Foochow, Shanghai, Nanking, Hankow, Tientsin, and Peiping. In the old-fashioned trades which are only slightly influenced by modern economic and social life, the guild is functioning as usual, but in those trades which are gradually being modernized as a result of the introduction of machinery or the emphasis on sanitary living conditions for the workers the guild is slowly being replaced by the modern labor union. In modern industries and factories, the superiority of the union is generally recognized by the workingmen and they are usually organized on that basis.

#### Movement Toward Unionization

TAKING the whole country into consideration, the labor-union movement is yet young; but in certain commercial and industrial centers it is rapidly gaining ground. In order that a fair idea of the



movement may be gained, the labor activities in Tongshan may be briefly described as fairly typical of what has been taking place in other industrial and commercial centers, such as Hong Kong, Canton, Kwangtung, Changsha, Hankow, and Shanghai.

Tongshan, near Tientsin, is the most important industrial district in north China. In this city a number of modern industries are developing fairly rapidly, including mining, railroad engineering, and the manufacture of cement, ceramics, fire bricks, and rugs. The mine in Tongshan has been using modern mining methods since 1878, being the first mine in China to adopt such methods. Toward the end of the Manchu dynasty, when the country was preparing for a constitutional monarchy, self-governing clubs were organized in Tongshan which admitted as members men of all walks of life. The miners were inspired by attending the meetings of these clubs and soon began to organize reading clubs for themselves. Miners who came from Kwangtung Province later organized a district guild known as the Kwangtung Guild, which was largely social in nature. Its members included all types of men who had migrated from Kwangtung to Tongshan. As the industrial workers in Tongshan became more numerous, they attempted a closer organization. Just at this time the revolution of 1911 was successful in other cities, and some members of the Kuomintang were encouraged to organize the Labor Party with headquarters in Shanghai and a branch in Tongshan. This political move on the part of organized labor harmonized with the local development in Tongshan. For a while the labor leaders in Shanghai and Tongshan kept in fairly close touch with each other. In 1912, however, when the Kuomintang was engaged in a struggle for political supremacy and was defeated by Yuan Shi-k'ai, the President-elect of the Republic, several important members of the party were exiled to foreign lands, and this brought about the dissolution of the short-lived Labor Party.

For some years the labor situation in Tongshan was quiet. In the meantime there were certain significant developments in the mining industry in that locality. In 1912 a merger took place between the Chinese Engineering & Mining Co., a British organization, and the Lanchow Mining Co., a Chinese corporation, the new firm taking the name "Kailan Mining Administration." The Kailan Mining Administration is now operating five mines along the Peiping-Mukden Railroad line, the annual output of coal from such mines aggregating about 4,500,000 tons. The labor force has been increased to over 20,000 men, including underground and surface workers.

Around 1919 the student movement gave a new impetus to labor, and the employees of the Peiping-Mukden line and the Kailan Mining Administration began again to organize along the lines of the modern labor union. A series of strikes followed. In 1920 the employees of the Kailan Mining Administration struck and won a victory. In the following year in one of the five mines another strike was declared for an increase in wages, but failed. These strikes greatly strengthened the position of the miners, and in 1922 they struck for the improvement of their economic and social condition and for recognition of their union. This strike, which lasted from October 10 until November 16, resulted not only in serious economic losses to the employees and the management but also caused the loss of human lives, as the strikers came into conflict with police sent from

Tientsin to preserve order. The influence of this industrial dispute was far-reaching. When the strike was in progress representatives of railway workers of several lines held meetings in Peiping to give financial assistance to the Kailan miners, to discuss plans for a sympathetic strike, and to plan for the organization of the railroad workers in North China. Although the railway workers' union did not come into existence until February, 1924, the movement for its organization really was the outcome of the miners' strike in Tongshan. As a matter of fact, since the Kailan miners' strike in 1922, the miners have taken a leading rôle in the movement for the organization of the workers in North China, and their influence is clearly seen to-day in the labor organizations of Tientsin and Peiping.

The unionization movement going in these centers gradually spreads to cities of less economic and industrial importance. The leaders, however, have not always been recruited from the most intelligent workers of the rank and file of labor. Capable leaders from the laboring classes are yet too few. Many unions were organized under the direction of the Kuomintang, others through the efforts of radicals, and a smaller number by student leaders. Very recently there has been a tendency to rely upon the intelligent workers to organize unions. When more unions of this kind are organized, there will be a stronger possibility of an independent labor movement for the general welfare of the working classes.

#### Trend Toward Industrialization

THE unionization movement in China has been in a sense necessitated by a changing economic and social situation from an industrialization standpoint. Some of the handicrafts of the country are gradually losing their historic importance and new types of industry are slowly developing. In this period of industrial transition two general tendencies are noted: On the one hand the tendency to bridge the gap between agriculture and industry, and, on the other, the development of modern industries.

By and large, farming constitutes the chief occupation of the bulk of the Chinese people, but the drift of population from the farm to the city is noticeable in some sections of the country, and this movement is likely to gain momentum as modern industry increases in importance. The only effective way to check the cityward drift is through the working out of a scheme by which village industries can absorb farm labor when the busy season is over, and by which woman and child labor can be utilized in the farming communities. As an illustration, the cloth-weaving industry of Kaoyang, Hopei Province, may be cited. After the Sino-Japanese war of 1895, cheap grades of Japanese cloth were imported to North China to supply the increasing demand of the laboring classes. Enterprising merchants in Kaoyang and Tientsin bought weaving looms and started to weave native cloth in imitation of the imported Japanese goods. Soon they persuaded farmers to install the same weaving looms in their villages, as the looms were small and inexpensive. The farmers found the cloth-weaving industry well adapted to their local conditions, and the industry has become prosperous side by side with agriculture. The farmers do not need to migrate to the cities for work, when they have nothing to do on the farms. Furthermore, the women and girls

in the homes are usually profitably engaged in weaving and so help to increase the family income. In this way, a village industry is helping the farmers to meet any deficit they may incur from poor crops.

Thus cloth weaving in Kaoyang may be considered an intermediate type of industry—a halfway development between agriculture and modern industry. About 140 villages in the neighborhood of Kaoyang are now carrying on this work as a subsidiary to agriculture. The cloth supplies the ordinary needs of the middle and lower classes of people not only in Kaoyang but in the great cities in North China. The Kaoyang weavers are doing an annual business of over \$2,000,000,<sup>2</sup> (\$1,000,000 United States currency). The Kaoyang cloth is usually durable and its price reasonable. These two factors have made the cloth popular among the consumers in North China and have practically eliminated the cheap grades of Japanese cloth from the markets. The Kaoyang industry shows the tendency toward industrialization in some rural communities in China and indicates the harmonious new relations between agriculture and industry. If this development can be carried out in wider areas the development of industrialization will probably be more conducive to the general welfare of the common people. In Kaoyang district, agriculture and industry not only do not come into conflict with each other, but they dovetail in an ideal manner.

In other parts of China, however, industrialization is going on in a more rapid way, especially in commercial and industrial centers. Here the questions confronting capital and labor are more complicated. Difficulties arising from industrial management, from marketing, from relations between employers and employees, are taxing the ingenuity of able business men. China is on the threshold of a new industrial era, and many vexatious industrial problems are awaiting solution.

#### Conditions in the Cotton Industry

Take the cotton industry for example. Next to the United States and India, China is the largest nation in the world for the production of raw cotton. But cotton spinning and weaving as a modern industry is of relatively recent growth in China. In 1888 the first Chinese cotton mill of the modern type was established in Shanghai. Seven years later the first large-size British cotton factory was opened in the same city. Since then there has been a keen competition between the two. Since 1918 Japanese manufacturers have come to China in large numbers, for in that year China revised her tariff schedule and raised import duties on cotton yarn and cotton goods which adversely affected the importation of Japanese goods into China. In Shanghai and Tsingtao, a rapid increase in Japanese cotton mills has occurred. In 1929 there were 120 cotton mills in all China, of which 73 were owned by the Chinese, 44 by the Japanese, and 3 by the British. The total investment of the industry is estimated to be about \$360,000,000 (\$180,000,000, United States currency), and the total number of spindles, about 3,700,000. Although more than 60 per cent of the cotton mills are Chinese owned, their total investment is less than one-half of the investment of the entire cotton industry. Among both the Japanese and British mills, there are factories with very large capital

<sup>2</sup> Conversions made on basis of 1 Chinese (Mexican) dollar = 50 cents in United States currency.



and modern equipment. Credit should be given to the Chinese for their initiative, courage, and cooperation. Among them are enterprising business men who have built up this important industry and who have attempted scientific management in some larger and modern mills. The Chinese availed themselves fully of the opportunity for developing this industry during the European war when the supply of cotton yarn and cotton piece goods from abroad was cut off. Although the cotton trade in China has recently suffered a depression, the prospect for further development is bright if the slump period can be safely passed. To-day there is a triangular struggle in the cotton industry among the merchants of Lancashire, Osaka, and Shanghai. The next few years will probably determine whether or not the Chinese can maintain economic superiority in this industry.

The treatment of labor in the cotton industry is fairly satisfactory. Generally speaking, the 2-shift system is maintained, each shift lasting about 12 hours. Sunday is a holiday. Spinning weavers receive from 40 to 60 cents per day (20 to 30 cents, United States currency) as wages, foremen and overseers are paid from 30 to 40 Chinese dollars (\$15 to \$20, United States currency) per month. As a rule the management provides neither free board nor free lodging for employees, but the workers are entitled to free medical care and to compensation for injury or death during employment. In the case of female employees, leave with pay is allowed before and after childbirth. When the price of rice soars, the management usually gives a rice allowance so that the employees may be adequately supplied with their staple food. Men are usually employed in cleaning, sizing, and packing rooms; women and girls in drawing, roving, spinning, and weaving rooms. Children do light spinning and bobbing.

In some of the modern mills, indoor recreation and outdoor sports are provided. There are also schools for workers and their children. In the case of a few progressive mills, lodging houses with modern conveniences are rented, at nominal sums, to the employees, the married and the unmarried being segregated, so that each class has fairly satisfactory living quarters. In the Yangtsepoo district, where a considerable number of the workers live, elementary education and social work are carried on by the Yangtsepoo Social Center.

In Pootung, across the Huangpoo River, some factory workers' families live in a "model village" where living conditions are quite modern and the rent is reasonable. Emphasis is being placed not only on hygiene but also on education and recreation, for in the village there is a playground and a reading room for the benefit of the residents.

#### Labor Conditions in Other Industries

Working conditions in a number of industries in China, however, are not nearly so satisfactory as those in the cotton trade described above. After all, China is an agricultural country and the transition from agricultural to factory labor in a number of instances appears to be too sudden. The Government is not adequately prepared for the change, and neither is capital nor labor. Consequently, various problems affecting the relations between employers and employees have arisen, and satisfactory solutions are few. Thus in purely modern industries, China's readjustment difficulties are obvious as the following brief discussion will show.



In the first place, the gradual substitution of machine for hand work is causing serious unemployment in certain industries. In manufacturing plants the introduction of the new mechanical devices means an increase of output on the one hand and a decrease of manual labor on the other. This has naturally caused dissatisfaction among the rank and file of labor, and an increasing number of disputes have arisen, throwing large numbers of men temporarily out of jobs. In 1929, unemployment in several leading cities became menacing. In certain industries in Hankow, Shanghai, and Canton, the number of the unemployed for part of the year was estimated to be between 2 and 4 out of every 10 workers in the industry. This situation is not likely to be greatly improved in the immediate future.

Secondly, the sudden introduction of modern living is also causing difficulties for certain working people. An alarming number of recent strikes in various cities have been caused mainly by competition—a struggle for existence—between workers in the modern occupations such as auto driving and those engaged in antiquated transportation such as ricksha pulling.

Thirdly, although Chinese laborers are noted for their dexterity in handwork, they are still inexperienced in running machines. Consequently the productivity of factory labor in China is surprisingly low. It has been estimated that it would probably take three Chinese workers in a factory in China to accomplish as much as one worker in a factory in England or America. Chinese laborers are usually illiterate and have had little industrial training, so they need very close supervision, which means high overhead expenses for the employer. Chinese factory hands have a great deal to learn about modern mass-production methods. Among the results of the inexperience of Chinese laborers in industrial work in factories are an unnecessary wastage of raw materials, a high breakage of finished products, and low production per man-hour.

Fourthly, the changing relationship between the management and men brought about by the labor-union movement is another source of friction. In the old days there was a personal relationship between the master and his apprentice, which found wholesome expression under the guild. This relationship was based largely upon friendliness and mutual good will. In the modern factory this personal relationship is gradually being replaced by a contractual relationship to which the average Chinese is not yet accustomed. Between 1918 and 1926 there were 1,232 strikes in all China about which there was some information. Out of this total, 283 strikes, or 23 per cent of the total, were due to alleged ill treatment of the workers by the employers, which illustrates the strained situation between capital and labor under the new industrial situation.

The above discussion naturally suggests the thought that industrial development in sections of China is going on a little too rapidly and that the country finds it difficult to adjust itself to the new situation. If China is allowed a freer hand in developing its industries, a slower process would perhaps be more beneficial. It would cause less unemployment, create less danger of dislocation between agriculture and industry, and enable capital and labor to prepare more effectively for the modern factory system.

## Labor and Radicalism

IT IS obvious that the industrial situation in China to-day is made more complex by radical propaganda. The growing menace of communism in some parts of China has forced industrialization to proceed at a faster pace than China is prepared for and to take a more precarious course than the country cares to follow. The roots of radicalism, however, lie deeper than the activities of the Soviet agents in China. In fact, toward the end of the Manchu dynasty, the teachings of St. Simon and Louis Blanc were gradually finding their way to the country from French Indo-China. French Utopian socialism appealed to some Chinese thinkers and furnished them with the idealistic background for producing certain types of revolutionary literature. The content of this literature was later made more realistic by the insistence on the study of the living conditions of the poor. This insistence was undoubtedly due to the influence of the scientific socialism of the German school, which was introduced into China soon after French socialism. Although the Socialist teachings were carried on secretly, the Socialists in China were strong enough to organize a party in 1911, which stood for the nationalization of public utilities, universal education, and high wages. As these ideas were too advanced for the new-born Republic, the party was soon dissolved and its leaders fled for their lives to foreign countries. During the student movement in 1919, when the nation was on the verge of a social revolution, noted Japanese Socialists came to visit China and actively cooperated with Chinese Socialists. These early efforts at Socialist propaganda paved the way for Russian communist activities in China which began with the visit of Popoff to Shanghai in 1919. In 1920 the Chinese Communist Party was organized and was soon affiliated with the Third International. The left wing of the Kuomintang watched the growth of communism in China with enthusiasm and in 1921 cooperated with the Soviet agents in China in successfully persuading the party to admit communists as members of the Kuomintang. This greatly strengthened the position of the Chinese communists. But Dr. Sun Yat-sen was not ready to introduce communism to China and he so expressed himself, giving as his reason the difference between the social and economic conditions in China and in Soviet Russia.

Between 1924 and 1927 the growth of radicalism in parts of China was astonishingly rapid. Its influence was first noted in the increase of labor unions. In Canton, for example, there were only about 80 unions in 1922; and in 1926, more than 300. The strikes were also more numerous. In 1923 the number of recorded strikes in all China was 47. There were, however, 56 in 1924; 318 in 1925; and 535 in 1926. The character of the strikes also changed. Before 1924, the workers' demands were largely economic and social, but between 1924 and 1926, political and patriotic demands began to assume importance. These changes were not wholly due to radicalism, but radical propaganda played an important rôle.

### Development of the Farmers' Leagues

THE joint movement of city and rural labor undoubtedly represents the determined efforts of the radicals in China. Moreover, it is an established fact that this movement fits in well with the policy of the Kuomintang. As laborers and farmers probably constitute over 80 per cent of the total Chinese population, Doctor Sun clearly saw the importance of securing the allegiance of these two groups in order to carry the revolution to complete success. When Borodin came to Canton in 1923, he especially emphasized the need of organizing the farmers so as to conduct more effectively the joint city and rural movement. China's agrarian problem, however, has existed for ages, and the Chinese farmers have deep-rooted grievances against high rent, high taxation, and high rates of interest. The economic sufferings of these agriculturists have furnished fertile soil for the seeds of discontent. Radical leaders merely quickened the growth. Although wretched conditions had existed in rural China for centuries, little opportunity was given the farmers for airing their grievances. When such an opportunity was given them by the Kuomintang, the farmers welcomed it with open arms and utilized it to the best advantage.

The farmers' grievances reach to the very foundations of agricultural China. It is not too much to say that the agrarian revolution in progress since the organization of the farmers' leagues will soon be a far more serious problem than the labor movement which has heretofore affected only city workers in the commercial and industrial centers.

### Reasons for Organization of Farmers' Leagues

The fundamental causes leading to the formation of the farmers' leagues are economic and social and include high rents for farm land, high taxation on agricultural produce, and high interest rates on borrowed capital. It is difficult to make a general statement to describe even roughly the prevailing conditions regarding rent in the agricultural districts of China. In parts of Kwangtung, Chekiang, Kiangsu, and Anhui (the rice-growing centers), however, it is quite a common practice for the landlord and the tenant farmer to divide the crops about equally between themselves. Thus the tiller of the soil finds himself usually unable to make ends meet, and his deficit is oftentimes made up by subsidiary crops plus the work of his wife and children. In a famine due to a drought, flood, or locusts, the farmer and his family are brought face to face with starvation.

Furthermore, the Chinese farmer pays a tax for the country road (which is usually muddy, narrow, and unfit for transportation), a police tax, a school tax, several taxes on his produce, and indirect taxes on the commodities for the daily needs of his family. On the other hand, he seldom receives adequate protection or enjoys the privileges which such taxes should ordinarily bring him.

Usury is openly practiced by money lenders in the rural districts, 20 per cent per annum being a fairly common rate, but higher rates are not at all unusual. When it is considered that the average farmer does not make more than 6 per cent per year on his land, and the interest on his borrowed capital is 20 per cent per year, it is easy to visualize the precarious situation in which many of the Chinese farmers



now find themselves. As they become poorer and poorer, they naturally grow desperate. This condition is likely to continue for some time unless some drastic rural reconstruction is effected in the near future.

The Chinese farmer is ill-treated and oppressed not only by landed aristocrats but also by bandits. Ex-soldiers frequently organize themselves into small bands and come to the villages to rob and plunder. Although the farmers pay heavy taxes to the Government and to the army, they rarely receive adequate protection and are therefore obliged to organize self-defense corps. These corps are fairly well equipped with antiquated or modern weapons and fairly well supplied with ammunition. They offer a certain measure of resistance to invading bandits, as their membership is open to all the able-bodied men in the village. Usually men in several neighboring villages in the same county or adjoining counties unite in one organization. The farmers are intensely loyal to their home communities and they frequently avert large-scale plundering by close cooperation with fellow agriculturists in the neighboring districts.

#### Composition of Farmers' Leagues

Membership in the farmers' leagues is open to all farmers and farm laborers but closed to the following classes: (1) Owners of land over 100 mou;<sup>3</sup> (2) money lenders who charge usurious rates; (3) those whose interests conflict with the farmers' interests; (4) priests, clergymen, monks, and those who practice witchcraft; (5) persons with imperialistic sympathies; and (6) opium smokers, and gamblers.

#### Growth of the Movement

In 1922 the first farmers' league was organized in the East River region of Kwangtung Province, the main purpose being to offer help to the district under flood and also to protest against high rents in that locality. The movement, however, soon died out, for the provincial government was unsympathetic to it. Not long afterwards the revolutionary government in Canton, under Sun's leadership, passed a resolution in favor of the "farmer's movement" whereby the farmers, like the members of other social classes, could enjoy the privilege of association. At the headquarters of the Kuomintang there was a farm-labor section as well as a city-labor section to look after the respective interests of the two classes of workers. Party agents were sent to near-by villages to instruct the workers in the principles and procedure for organizing farmers' leagues. A greater degree of self-government was given to farmers' leagues in outlying districts, as the communication between them and the party headquarters was difficult. Because of this latitude, some of the farmers' leagues have become ardent supporters of the left wing of the labor movement and have caused considerable trouble to the party.

From Kwangtung the farmers' league movement gradually spread to other Provinces, and political struggles of equal significance were noted. Thus in the fall of 1923, the leagues in Lu Shih County, Honan Province, came into conflict with the Shensi army which came there to suppress the local bandits. The army depended upon the

<sup>3</sup> 1 mou is about one-sixth acre.



county for food supplies and for the feeding of the horses. Crops failed and the farmers organized to drive away the army in order to relieve themselves of the economic burden its presence involved. A portion of the army retired from the county seat. Soon the remaining army troops were found to be negligent in their attempt to suppress the bandits and another attack was launched against these soldiers by the farmers' leagues, which resulted in the exemption of the farmers from paying taxes to the army. This burden was entirely shifted to the city people, who also found it too heavy and complained to the farmers. The farmers in Lu Shih, together with fellow agriculturists in five or six other counties, jointly besieged the county seat of Lu Shih, and the Shensi army was forced to vacate the place.

#### Activities and Demands of the Farmers' Leagues

The activities of the farmers' leagues may be summarized as follows: (1) The exertion of considerable political influence both in Kwangtung and other Provinces; (2) the support of the Canton Government in its struggle against the merchant corps in 1924; (3) assistance in Kwangtung, in supplying the revolutionary army with food during its northern expeditions in 1925, 1926, and 1927; (4) the taking of a very important part in maintaining the Canton-Hongkong strike in 1925 and enforcing the anti-British boycott in the rural districts of the Province.

The farmers' leagues have presented some vital economic needs of the country, demanding the drastic reduction of rent and taxation, the organization of consumers' cooperative societies and cooperative credit unions, agricultural reforms including irrigation and drainage, the selection of seeds and the rotation of crops, the prevention of famine, building of roads, reforestation, and the utilization of arable land now lying waste. They also urge the increase of by-products and subsidiary crops by utilizing the off-season and employing the women and children in farm families. They call upon the Government to survey public properties, including waste lands and community lands, so that some of these tracts may be distributed among landless farmers, that other tracts may be given to the Government to increase revenue, and still others may be given to the farmers' leagues.

Some of the above-mentioned measures are gradually being adopted. Thus beginning with January, 1927, the rent in some farming villages in Kwangtung was reduced 25 per cent, and a similar reduction has been effected in parts of Chekiang and Kiangsu. This action has alleviated the economic pressure of tenant farmers, although it has in some cases caused a corresponding decrease in the value of land, which also works hardship upon the small landowners.

The efforts of the Government in connection with the provision of rural credit facilities have thus far been less successful, because the points of contact between the bankers and the farmers have been few, and neither of these two classes appears particularly interested in bringing about closer association. This difficult situation, however, is being improved somewhat by the China International Famine Relief Commission, a private philanthropical institution with headquarters in Peiping. One of the commission's main purposes is to improve rural conditions in China by organizing credit societies

among farmers and by lending money to them at low interest. Around Peiping and Paoting, in Hopei Province, about 300 credit societies are now recognized as sound farmers' organizations which may borrow money from the China International Famine Relief Commission at an interest rate of about 6 per cent per year. This rate is about one-third or one-fourth of the rate charged by local money-lenders. Between 1923 and 1929 the same organization spent over \$8,000,000 (\$4,000,000, United States currency) for engineering work such as irrigation and drainage systems, and the construction of dykes and dams, wells, and roads in famine areas. A large number of poor farmers in more than 10 Provinces are deriving great economic benefit from these constructive undertakings.

The farmers' leagues also demand the establishment of rural schools, for the dissemination of rudimentary information on public hygiene and scientific farming and for the promotion of social education by such means as popular lectures, the modern tea house, and the community play. The provincial Government of Kiangsu is said to be spending about \$400,000 (\$200,000 United States currency) a year on the people's education throughout the Province and has established headquarters in Wusih, a city famous for its cotton mills, flour mills, and silk filatures. Special attention is given to the educational needs of the farmers and instruction is given in the cultivation of mulberry trees and in silkworm culture. The tea-house story-teller is no longer a humorous entertainer as in the old days, but an expert in popularizing elementary scientific information on farming and in giving a necessary popular education with a view to building up an intelligent citizenship among the farmers. These experiments meet the educational needs of the joint city and rural labor movement, as in the city of Wusih the factory employees are largely drawn from near-by villages, and both mill hands and farmers are therefore benefited by the people's schools.

#### The Farmers' Leagues and the Red Spear Societies

Consideration should be given to the intimate connection between the farmer's leagues and the Red Spear Societies in some rural communities in China. As already pointed out, the farmers' leagues usually have self-defense corps. This feature of the leagues is particularly attractive to the Red Spear Societies in central China, for example in Honan Province where these societies were the first secret organizations to fight against bandits, high rents, and corrupt officialdom. When the Christian general, Feng Yu-hsiang, was in control of Honan in 1923, he encouraged the farmers to organize, and some of them sought the cooperation of the Red Spears who were already well organized in certain sections of the Province. The Red Spears are both a hope and a menace to the farmers. In so far as these societies are fighting against banditry and for rural economic improvements, they are helpful to the agriculturists. On the other hand, a considerable number of the Red Spears are local vagabonds and naturally are a disturbing factor in farming communities.

#### Labor, the Kuomintang, and Governmental Policies

THE political basis of the joint city and rural movement as above outlined is the platform of the Kuomintang. In regard to domestic policies, the party pledges in article 10 to reform village organizations



and to improve the living conditions of the peasants. In article 11 the Kuomintang expresses its determination to enact labor laws for the improvement of the workers' living conditions to protect labor organizations, and to assist in their general development. Thus the Kuomintang claims to be a friend of the laborer and the farmer and has from time to time attempted to improve their economic and social status. In addition to the special sections on city and farm labor at the headquarters of the party, which have already been mentioned, there are similar provisions for the carrying on of similar work by special agents attached to the local organs of the Kuomintang in provincial capitals and in important cities throughout the country. Much of this work in connection with city and rural labor is still revolutionary and in the nature of propaganda, and the men in charge are usually young and inexperienced. These youthful leaders are doing more to stir up the city workers and the farmers than to find adequate remedies for the labor unrest.

Comparatively speaking, in the cities and rural districts, more systematic work is being attempted by the Nationalist Government in Nanking, which is organized directly under the Kuomintang. These governmental efforts may be visualized best through recent labor laws. Although earlier governmental attempts at labor legislation have been made in China, the labor laws of the Nanking Government seem to be somewhat more consistent, because it has had the benefit of the experience of the preceding governments.

### Recent Labor Legislation

THE arbitration act of April, 1928, represents an effort of the Nationalist Government to cope with the strike situation of recent years. It provides that disputes in certain industries such as public utilities should first be referred to the board of conciliation for investigation. Conciliation failing, the matters in controversy should then be referred to the board of arbitration for further inquiry. During the period of investigation by the board of arbitration, which frequently lasts one week, neither lockout nor strike is permitted. It is the purpose of this law to restrict the unscrupulous use of the strike, which has recently caused great and frequently unnecessary damage to Chinese industry and society. Before 1927, radical labor leaders in various parts of China advocated a ruthless class war which greatly strained the relations between capital and labor. Since the official suppression of communism in 1927, the Nationalist Government has taken a more or less firm stand against radical labor, and this attitude is expressed in the arbitration act.

Broadly speaking, the same conservative stand is taken in the regulations governing the relations between capital and labor, and also in the regulations for the employment of railway workers, which were promulgated by the Kwangtung Provincial Government in 1927. These regulations deprive the unions of the right of recommending their members to employers for work. This right which the unions previously enjoyed for several years prior to 1927 was mainly responsible for the rapid growth of the labor movement in South China. By the exercise of this right, the unions enforced not only a closed-shop policy but also a closed-union policy, so that the employer could employ only the members of a certain union and only those who were recom-

mended by that union. This right of recommendation, together with the right to strike, was restricted by the above-mentioned regulations.

In like manner, the attempt to restrict labor activities is reflected in the 1927 ordinance of the Hong Kong Government, which declares any strike (or lockout) illegal if it has any object other than the furtherance of a dispute within the trade or industry in which the strikers are engaged or if it is designed or calculated to coerce the government either directly or by inflicting hardship upon the community. The same ordinance prevents intimidation, the use of trade-union funds for political purposes outside of the Colony, and the organization of a trade-union in Hong Kong as a branch of any union in China.

Thus, the arbitration act, the Kwangtung provincial regulations, and the Hong Kong illegal strike ordinance all represent labor legislation of the repressive type which attempts to curtail the workers' freedom and restricts the Left-wing tendencies of the labor movement. These laws represent a natural reaction to radical labor activities in certain parts of China during the few years preceding 1927.

China's experience in industrial legislation is admittedly new and her machinery for labor administration is yet inadequate. The universal enforcement of labor laws in the immediate future is not to be hoped for, because of both internal and external obstacles. Internally, China is united only in name. Certain sections of the country still ignore the orders of the central government. In fact, the stability of the central government itself is open to question. Local conditions in the Provinces may prevent the adoption of features of national labor laws. Thus, when the writer was traveling in China in 1929, he found that the Provinces of Kwangtung and Fukien were not enforcing the arbitration act, and the officials of Kwangtung Province appeared to be satisfied with the provincial regulations governing the relations between capital and labor and those governing the railway employees above referred to.

External obstacles to labor law enforcement are connected with extraterritoriality. As a diplomatic and international political issue extraterritoriality has already attracted wide attention in China and abroad. The relationship, however, between extraterritoriality and the enforcement of labor laws requires elucidation. It is clear that the existence of concessions in China places foreign employers in these areas beyond the reach of Chinese law and thus makes it impossible for the Chinese Government to enforce labor laws in such areas. As an illustration, the work of the Bureau of Social Affairs in Shanghai may be cited. This is one of the efficient bureaus of the Chinese Government and is engaged in collecting, organizing, and publishing data on industrial, economic, and social questions. It is also in charge of the administration of the arbitration act so far as Shanghai is concerned. In disputes, however, arising between foreign employers in the International Settlement and Chinese labor, foreign employers or their representatives seldom appear. Furthermore, when the bureau seeks information on disputes and strikes and on wages and cost of living for compilation and publication, only a small number of foreign firms in Shanghai have shown a willingness to cooperate. Evidently, the pioneer endeavors of the bureau will open up possibilities for the scientific study of social economics in China, but extraterritoriality is a great hindrance to the satisfactory accomplishment



of this agency's program. This explains in part the view of China's delegates to the twelfth session of the International Labor Conference which was held in Geneva, 1929, when they urged the abolition of extraterritoriality as a condition antecedent to the effective enforcement of labor laws throughout China.

#### Labor-Union Law of 1929

In November, 1929, the Nationalist Government promulgated the labor-union law. Under its provisions male and female workers of the same trade or occupation may now organize a union to increase their knowledge, skill or productive power or to improve and maintain their standard of living. However, government employees, employees of public utilities, and members of the army and navy are not allowed to organize unions. No strike is permitted until the dispute has been referred to arbitration. If arbitration fails, the workers concerned may declare a strike if two-thirds of those present at a mass meeting vote by secret ballot in favor of the strike. It also prohibits a worker from having his employer or a fellow worker arrested during the strike, and prohibits an employer from dismissing a worker on account of his union membership.

A gratifying feature of the law is the explicit recognition of the right of association. The workers have long been agitating for this right, and the Peiping-Hankow railway strike of 1923, which involved great loss of property and human lives, was fought on the main issue of the right to organize the railway union. The present law really recognizes the organization of the trade-union which is well adapted to the existing economic and industrial situation. The provision restricting the employer from dismissing a worker on account of his union affiliations or restricting the worker's having a fellow worker or employer arrested during a strike is probably an attempt to cope with the abnormal strike situation in recent years. Certain labor groups in China have recently made an unscrupulous use of intimidation and violence in furthering trade disputes and employers have retaliated by dismissing workers merely because of their union affiliations.

#### Factory Act of 1929

Toward the end of 1929, the factory law of China was promulgated by the Nanking Government.<sup>4</sup> This law prohibits the employment of children under 14 years of age in factories and provides that Sunday shall be a holiday; that the working hours for the adults shall be limited to eight hours per day, but may be increased to 10 under certain conditions; that wages shall be paid on the basis of the local cost of living of the workers; that benefits shall be paid to workers in case of injury, sickness, or death, and to female workers before and after childbirth; and that a form of employee representation shall be introduced in modern factories.

*Working hours.*—In a way, the factory law is more important for Chinese industrial development than the labor-union law, but its immediate enforcement will probably be more difficult. In illustration, the provision on working hours may be cited. This provision touches some fundamental factors in China's industrial, economic, and social situation. Under the guild in the old days, the Chinese worker began his labors at sunrise and ceased them at sunset. In

<sup>4</sup> The text of this law was given in full in the June, 1930, issue of the Labor Review (pp. 106-113).

some trades during certain seasons of the year he had a little night employment. Although the working hours were extraordinarily long, there was no "driving" or "speeding up" as commonly practiced in a modern factory. In addition, the guildsmen were allowed to drink tea, smoke, and indulge in certain social pastimes during working hours. This custom of long working hours persists in a number of the reorganized handicrafts to-day. Whether this ancient custom can be suddenly changed by the new factory law is extremely doubtful. In a number of modern factories, where the working hours had been generally reduced even before the present law was enacted, it will be easy to conform to the new provisions. But these industries are, after all, in the minority.

Furthermore, the question of working hours must be considered in relation to production. It is a matter of common observation that a number of Chinese industries are not efficiently managed and that their production is unusually low. Other things being equal, a reduction in working hours would result in even less production. This is especially true in manufacturing establishments. Recently, the radical miners of the P'ing Hsiang Mines on the Kiangsi-Hunan border were successful in their demand for a drastic cut in working hours. The decreased hours, however, resulted in such a reduction in the output of coal that the factories in Hankow and in the lower Yangtse Valley had to import coal from Japan. Although the short working day is conducive to the workers' health and is frequently insisted upon by organized labor in progressive countries in the West, it appears impractical for China at present. Chinese mines now use manual labor on a large scale, and the reduction of working hours without a corresponding increase of machinery would naturally cause a substantial decrease in the output of coal. Since an appreciable increase of machinery in Chinese industries is unlikely in the immediate future, the short working day would surely have an adverse effect upon production.

Japan is far ahead of China in industrial progress, yet Japan has a much more conservative factory act. The revised factory legislation of Japan became effective July 1, 1926. For factories employing male laborers under 16 years of age and also female employees, the working hours are limited to 11 per day, for factories employing adult males only no limitation of working hours is imposed. As to rest days a minimum of two a month is stipulated. Since Japan is a manufacturing nation and considers China the chief consumer of her manufactured goods, the advantage of this conservative act, from the point of view of production, over the factory law of the Chinese Government is obvious.

The situation in regard to Sino-Japanese competition in China is even more serious. Already certain groups of Chinese merchants are suffering from the keen competition of Japanese capitalists. A case in point is the increase of Japanese cotton mills in China since 1918. Moreover, there are about 190 large Japanese factories in South Manchuria which are very efficiently operated and are enforcing conservative labor policies. Their working hours average 9.8 per day and their rest days average 2.2 per month. Even in Osaka, the largest industrial center in Japan, the working hours in 170 leading factories average 9.2 per day and rest days average 2.9 per month.



In defense of the Chinese factory act's section on working hours, it should be pointed out that this provision represents an attempt on the part of the legislators to comply with a resolution of the second National Congress of the Kuomintang, in January, 1926.

*Provisions concerning woman and child labor.*—The factory law prohibits the employment of children under 14 years of age in industrial work. Children between 14 and 16 years of age may be permitted to do light labor, but must be excluded from dangerous or poisonous occupations. Their working hours are limited to eight per day. Night work for children and women is prohibited. In this China follows the lead of Hong Kong, which is employing a considerable number of Chinese children and women in the factories. Since January, 1923, Hong Kong has been enforcing an ordinance for the industrial employment of children which was amended in November, 1929, to prohibit women and young persons between 15 and 18 from working at night. Women are allowed in dangerous trades by special permission only. The minimum age at which a child may be employed in a factory is 10 years, a child of 12 may be engaged in light work in the factory, but no child under 15 may be allowed to work in dangerous trades. The cigarette factories in Hong Kong and the knitting factories in Kowloon usually employ a large number of children, mostly girls, between the ages of 12 and 15, and are observing the ordinance quite strictly. The Chinese factory law, however, proposes to deal with slightly different conditions. In China, the important centers of industrial work for women and children include the silk filatures in Shunteh (near Canton), silk filatures and cotton mills in Shanghai and Wusih. From a visit to these cities in 1929, the writer was impressed with the preponderance of women and children in these industries. A large number of the children can not be more than 10 years of age. If the minimum age limit of 14 years, as proposed in the factory law, can be strictly enforced, it will surely be a great blessing to the multitudes of underfed children. It is questionable, however, whether their parents or guardians will tolerate this, as families rely upon children's earnings to help defray necessary expenses. There is urgent need for the protection of women and children in industrial work in China, as their working hours are unusually long, their wages inadequate and their working conditions unhygienic, but the enforcement of protective laws is a very difficult problem for the Government.

### Conclusion

THE foregoing brief description of the labor situation in China may be summarized as follows: Political unrest has hindered the development of industry in parts of China. Industrialization, however, is proceeding in the midst of civil war, as the social stability of the country makes possible a continuity of the economic and social life. Industrial progress may be viewed in the face of two main trends of the labor movement—the decline of the guilds and the rise of the labor unions. Parallel with the organization of the workers in the cities is the growth of the farmers' leagues in the rural communities. As farmers far outnumber the city workers, and as they have long been the victims of economic and social oppression, their organization will probably precipitate an agrarian revolution in the near future. Joint action by farmers and city workers has been the definite policy

of the Kuomintang, which is friendly to the common people. Several national labor laws have been proposed with the dominant aim of improving the economic and social status of the working classes. Although the uniform enforcement of these laws is not to be expected in the immediate future, the attempt of the government to deal justly with capital and labor is a great step toward better harmony in industrial relations. Up to 1927, radicalism in China had been a disturbing factor in the labor situation. Uncompromising and destructive radical activities seemed to have caused great damage to Chinese industry and society. Recently, communist propaganda has been suppressed and the labor movement has gradually swung back to the conservative side. The events of the next few years will perhaps determine whether the Chinese workers are able to build up an active and intelligent labor movement for their own benefit and for the material prosperity of the nation. If greater stability obtains throughout the country, orderly and wholesome development of industries may soon be expected.

### Variations in Employment Trends of Male and Female Workers

THE Women's Bureau of the United States Department of Labor, in a recent study<sup>1</sup> entitled "Variations in Employment Trends of Women and Men," considers the problem as to whether or not employment statistics should be collected and presented separately for men and women. Naturally, in collecting and presenting employment statistics any simplification of the basic facts required is very much to be desired, provided that such simplification does not reduce the usefulness and significance of the facts. It is, therefore, highly desirable that before finally adopting any simplified method of presenting statistics on employment there should be careful examination of the possibility of the loss, through such simplification, of fundamentally important facts and the obscuring of others.

The study was suggested at a meeting in New York City on April 13 and 14, 1923, of the Committee on Governmental Labor Statistics appointed by the American Statistical Association. This committee is concerned with improvements in methods of collecting and presenting employment statistics, and its membership consists of representatives of State and Federal bureaus and other organizations actually collecting employment data.

For many years the United States Bureau of the Census, in its reports on employment in manufacturing industries, presented figures showing the number of male and female wage earners. In 1921 this practice was discontinued and has not been resumed.

It is true that women form a comparatively small part of the wage earners of the Nation and that therefore in any general statistical presentation of employment figures the trends would be chiefly influenced by the trends of men's employment. But it is equally true that with the recent developments of industrial life in this country significant changes have taken place in the status of women, though they are still in the minority among wage earners.

The significance of such changes can be considered only when it is known just how the developments of women's employment differ from

<sup>1</sup> Published as its Bulletin No. 73.



those of men's. If it is found that the trends of employment for the two sexes are the same, figures giving employment statistics for the two groups combined will be adequate and will be simpler of collection and presentation. But if it is found that women's employment is subject to different influences and reacts differently from men's, then it is essential for a full understanding and facing of the industrial situation that the employment trends for each sex be known.

It is the usefulness and significance of women's employment figures that the Women's Bureau study seeks to determine.

### Source of Data

THE most satisfactory and significant field for study was presented in the figures available in the State of Ohio. Since 1914 this State has collected monthly figures on employment, by sex, for wage earners, clerical workers, and sales people not traveling; for the years 1916 to 1922 these figures had not been published; for 1922 they had not, at the time of inquiry, even been tabulated. But it was apparent that here was the most promising field, since material was available on the sex distribution of clerks and of sales people, as well as wage earners, for the years 1914 to 1924.<sup>2</sup> Accordingly, Ohio was selected as the field for study, and it is this valuable series of monthly data, culminating in reports for 30,439 establishments and 1,055,720 employees in 1924, that constitutes the basis of the present report.

In the 11 years the data collected have been of three grades of completeness: (1) All persons known to be employers—1914 to 1920; (2) all persons known to have five or more employees and some electing to be insured though having fewer than five employees—1921 to 1923; and (3) all persons known to have three or more employees and again some electing to be insured—1924.

To test the general accuracy of the Ohio figures and the validity of the trends of employment represented by them, the Women's Bureau compiled the figures on employment given by the Federal Census of Manufactures for 1914, 1919, 1921, and 1923 for Ohio, subject to the necessary reclassification, computed index numbers of employment based on the average for 1914, and plotted the resulting curve on the charts showing curves for the manufacturers' figures given by the State authorities. The similarity of the trends indicated by the two sets of figures is very marked, and the indications of trend of employment in Ohio resulting from two sets of figures are nearly enough alike to substantiate the fluctuations shown by the more detailed and continuous State figures.

Regarding the continuity of the samples taken for the period under discussion, certain qualifications of the material studied appear. The establishments reported by the Ohio Division of Labor Statistics are not the same throughout the 11 years, nor is the classification of the establishments always alike, nor is the scope of the figures always identical. However, the extent to which these various qualifications can affect the validity of the figures reported is not so serious as at first appears.

<sup>2</sup> Later figures have since been made available by the State, but it has not been practicable to use them in this report.

Taking first the changes in the number of establishments reporting, the comparison between the State and Federal census figures shows that on the whole the State figures represent with great accuracy the volume of employment—covering, in 1919, 97.3 per cent of the Federal total; in 1921, 97.9 per cent; and in 1923, 98.4 per cent—though the number of establishments in the State is reported very differently by the two authorities and there are considerable differences from year to year in the numbers reported by the State. However, in a study of employment trends it is the volume of employment that is the important aspect, and a fluctuating number of establishments reporting may give a more accurate picture of the situation than reports from only identical establishments.

A more serious qualification of the figures presented is the changes that have been made in classification at different times during the 11-year period under discussion. Although these changes in classification have probably altered somewhat the general trends of employment for some of the smaller classifications, they do not, of course, influence greatly the trends represented in the larger classifications. From the viewpoint of the study, the changes in classification can not be considered as affecting materially the significance of the figures, for the purpose of the study is to compare the trends of men and women and the extent to which they are affected in the same way by certain economic situations. The minor changes in classification that have been made from 1914 to 1924 probably have had very little effect in bringing about a difference in, or greater similarity of, trends for the two sexes.

Of course, the smaller the classification the greater the possibility of distortion of the curves showing trends of employment accompanying any change in the classification or inclusiveness of the figures. For this reason it is in the larger classifications only that the fluctuations and comparisons of trends can be considered uninfluenced by any changes in statistical method that have been made during the 11 years.

To facilitate the interpretation and analysis of the mass of figures presented here, the Women's Bureau has prepared charts for each of the 54 classifications for which figures are presented. These charts show the trend of employment in two ways. One series is confined to the changes within a year and is plotted separately each year from index numbers based on the number of employees in January. In this series the figures are illustrated separately for men and women, but the total is not given.

The other series shows a continuous curve for the 11-year period, the base being the average number of employees in 1914. In this series the figures are illustrated separately for men and women and a third curve shows the trend of employment for the total. For most of the charts on manufactures, curves are entered for 1914, 1919, 1921, and 1923 to illustrate the trends shown by the United States census of manufactures.

Although employment figures from only one State, and for only 11 years, can not be considered to be comprehensive enough to form a basis for generally applicable findings, they are serviceable as indications of probabilities that can be tested through more comprehensive data.

## Analysis of the Charts

IN GENERAL, the most striking fact revealed by the curves is the similarity in the trends of employment of men and women. The figures for the 11 years in Ohio show that both when employment is declining and when it is increasing the general trend is almost universally the same for the two sexes.

But this similarity of trend is not always found in men's and women's employment. There are certain periods of economic disturbance or stimulation where the course of employment for men and that for women have taken very divergent paths. There are certain occupational concentrations for each sex which may result in extreme similarities or extreme differences in the course of employment. It is the significance and extent of these differences and similarities that are of foremost importance in estimating the validity for each sex of the trends indicated by the figures showing totals and not differentiating by sex. It is in the crucial years, from a standpoint of economic significance, that the differences come for the two sexes, and in those years curves separate for men and women are necessary if the facts are to emerge.

With minor exceptions it may be stated that, on the whole, the general course of employment in Ohio as illustrated in the figures is upward for both men and women, and this tendency is represented with a fair degree of accuracy by the figures and curves for the total. In the few cases where the tendency is downward this tendency usually is the same for both sexes and is illustrated by the curves for the total. Even seasonal trends are very likely to be similar for the two sexes and, therefore, represented faithfully in the curve for the total.

## Long-Term Trends

The most significant of the differences between the trends of the two sexes is the difference in the long-term trends. Although, as stated, the general course of employment is upward for both men and women, in many of the classifications the figures when separated by sex show a distinct tendency toward an increasing importance of women throughout the 11-year period under consideration. In a few classifications there has been apparently a decrease in women's importance, but this is not nearly so often the case.

The increased proportionate importance of women is particularly striking and consistent in the clerical classifications, all of which show considerable and steady increase in the proportion of women.

In the manufacturing industries as a whole there seems to have been very little permanent change in the proportionate importance of women among the wage earners, but this is not true when the figures are examined for the separate manufacturing classifications. Among these groups there are many examples of increased importance of women, as in the manufacture of iron and steel and their products; electrical machinery, apparatus, and supplies; pottery, terra cotta and fire-clay products and the group of which it is a part—stone, clay, and glass products; and rubber products. In none of these is the proportionate increase for women indicated by the total curve, although in every case the total curve does show the general trend of employment during the period under consideration.



In a few cases the increased proportionate importance of women is due more to a decline in the number of men than to any development in actual employment for women. This is apparent in the figures for tobacco manufacturing and for its subsidiary group, the manufacture of cigars and cigarettes, etc. It also appears in the curves for the manufacture of leather and leather products and its subsidiary group, the manufacture of boots, shoes, etc.

In a smaller number of classifications it is apparent that women became of less importance during the 11-year period. This is true of sales people, to a less degree of wage earners in trade, retail and wholesale, and to a slight degree of wage earners in service. In the manufacturing classifications some examples of decreasing importance of women are found in the curves for the manufacture of boxes (fancy and paper) and drinking cups, metals and metal products, and printing and publishing. For those groups in which there has been a significant decrease in the proportionate employment of women or of men this fact would be totally lost sight of if the figures on employment were shown only for the total.

Of course there is a remaining group of classifications in which the relative importance of the sexes did not change conspicuously during the 11-year period. This includes a few of the subsidiary groups of manufacturing—probably the most conspicuous example being the classification of wage earners in the manufacture of textiles. Here the proportionate increases for men and women during the 11-year period are almost identical, though in the subsidiary groups, especially hosiery and knit goods, the sexes did not fare alike.

In cases such as canning and preserving and the manufacture of lumber and its products the figures and curves showing trends for total employment are quite accurately indicative of the long-term trends for each sex, but they are very much in the minority. It is more usual to find in the various classifications that there has been a change in the relative importance of the sexes and that this is not indicated in the figures showing only total employment.

If the significance of the curve for the total as an indication of trend for either sex is to be evaluated adequately, it will be necessary to discover whether there are any influences that make consistently for any one type of deviation for either sex or that bring about a greater similarity. In other words, how is the resemblance between the curve for each sex and the curve for the total affected by the size of the group; by the scope of the industries and occupations included; by the relative importance of the two sexes; by the seasonal requirements of the industries included; by the developments within industry leading to changes in product and methods of production; by the concentration of one or the other sex in certain definite occupational lines; by the influences of general economic conditions, such as the war or the depression of 1920-21; or by local situations, such as strikes affecting more limited groups included in the classification?

If certain of these factors can be shown to have a consistent and predictable effect upon the resemblance between the trends for the two sexes and that for the total, it may be possible to accept as accurate the indications of the total, making such qualifications for either sex as the type of the classification and the period under discussion may require. If this can not be done, if the effect of these various factors is so erratic as to permit no generalization, the only alternative is to

require employment figures separately for each sex if the significant trends of women's employment are to be made clear. The bureau study considers the influence of each of these factors on men's and women's employment trends.

#### Size and Type of Classification

In considering the relation between the size of classification and the differences in the curves for the sexes, the curves indicating the trends for all the employees covered by the Ohio figures were examined.

Apparently there were three periods when there were distinct differences in trend for men and women. The chief differences in the curves are the more rapid increase of men from 1914 to the middle of 1917, the more rapid increase of women during the latter part of 1918, both due probably to the war, and a smaller decrease of women than men during the last months of 1920.

The differences that appear in the smaller classifications are neither consistently greater nor consistently less than those in the largest of all classifications. The classifications that make up the total group of all employed persons are most of them very distinct in type, and some show in the trends for the sexes great similarities and some great differences which do not combine in the more inclusive classifications so as consistently to offset or to emphasize each other. Combination of the figures for several groups has not resulted in a flattening out of dissimilarities. Evidence of dissimilarity in the largest classifications is, of course, not so extreme as in some of the smaller groups, but, on the other hand, there are not a few of the smaller groups where the resemblance in trend for the two sexes is far more marked than in the larger groups.

Apparently it is the type more than the size of the classifications included that influences the variability of trend for men and women. When the classification is a fairly homogeneous one, built along functional lines, there is a far greater similarity in the trends for the sexes than when the classification is such as to include many widely different types of industry and occupations. For example, the similarity of trend for the two sexes in the clerical (bookkeepers, stenographers, and office clerks) and in the sales group, is very marked, and the trends for male and female clerical workers in manufacturing establishments are much more like those for other groups of clerical workers than they are like those for manual wage earners employed in the same manufacturing establishments.

With so complicated a subject as trends of employment it is not possible to isolate the effect of any one factor when so many influences are bringing about increases and decreases for each sex. But it seems safe to state that if employment figures were consistently classified in homogeneous groups in regard both to the occupational concentrations of the sexes and to the product, the trends for the two sexes would be very similar and very faithfully reproduced in the figures for the total.

#### Seasonality

Seasonality is another factor found in certain of the classifications influencing a variation in men's and women's trends of employment. In some industries a distinct seasonal tendency for one sex disturbs what would otherwise be a very great similarity and causes a diver-

gence from the trend indicated by the total. It is more usual, however, for both sexes to be affected by the seasonal stimulation, although not generally to the same extent. On the whole, the curves for the Ohio figures show that where there is a distinct seasonal trend for one sex and not for the other this trend is reflected, if it is sufficiently marked, in the total curve.

Intense seasonal fluctuation occurring for either sex that is much in the minority is not reflected in the total curve. This is admirably illustrated by agriculture. Wage earners here are faced with extremely seasonal work that fluctuates more greatly for women than for men. The curve for total employees follows almost exactly the curve for men, due to the very large proportion men formed of all employees (about 93 per cent). The extreme peaks of women's employment during June are not indicated in the curve for total employees, but that June is the season of highest employment for both sexes is plain from the total curve.

Other examples where the total does not show the extent of the fluctuation for women are wage earners in trade, canning and preserving, and bakery products.

When trends for men and women are similar, the curve for the total represents the situation with considerable fidelity, but when trends are different—and these are the crucially important spots as far as women's opportunity is concerned—the total curve will illustrate most closely the trend for the sex numerically superior, and this usually is the men.

#### The World War

Probably it is the effect of general economic conditions that causes the most violent deviation for the two sexes from the trend indicated by the curve for the total. The outstanding example of this is found in comparing the course of men's and women's employment during the period of the World War and during the depression of 1920-21.

From an examination of the employment curves it is apparent that the readjustments and stimulations resulting from the war did not affect the trends of men's and women's employment in the same way. For example, the curves for all wage earners show that within the early part of 1915 both men's and women's employment began to increase, but the increase was much more rapid for men than for women. It was not until the middle of 1917 that women's increases began to catch up with the men's. In 1918, although men's employment increased at a fairly rapid rate, women's employment increased even more rapidly, until by August, 1918, the women's index equaled the men's. After August, 1918, the number of women continued to increase for a few months while that of the men decreased, but during the last month of the year, after the war was over, the number of women as well as that of the men decreased. This decrease continued for both sexes until March, 1919, and for women it was prolonged until June, by which time men's employment had picked up again and their indexes once again equaled and then exceeded that of the women.

Among the clerical workers, the effect of the war apparently was to increase the employment of women at a greater rate than the employment of men. The women's curve started to ascend at a greater rate than men's at the beginning of 1917 and continued so



until the end of 1918, but the curve was not a fluctuating one for either sex and their increases had very much the same trend. The war, however, left the women in clerical work in a very much better position than the men.

For the sales people there seems to have been practically no change in the trends for the two sexes resulting from the war. The curves maintain the same relative positions almost without exception until the beginning of 1918. For the first few months of 1918 men's employment remained much as usual, but women's employment increased, and when men's employment showed an unusual decrease in the last part of 1918 the women maintained their usual great seasonal increase and started 1919 in a better position than did the men, who, however, quickly regained their usual position in the industry and by August the curves for the two sexes started to resume a shape similar to that preceding 1918. The report points out that—

Evidently for the sales group what small effect the war had on accentuating differences in trend for men and women came later than it did for all wage earners, the group so largely influenced by the manufacturing industries.

In practically all the classifications in which there was a difference of trend for the two sexes during 1917 and 1918, the trends indicated by the total figures and curves followed the trends for men rather than those for women. On the other hand, the period of depression following the war, during the early part of 1919, had generally a more serious effect on women than on men. Women's employment during this depression dropped farther than men's or dropped when men's did not in the groups following: All manufacturing; leather and leather products and its subclassification, boots and shoes; paper boxes; automobiles and parts; miscellaneous manufacturing and its subclassification, electrical machinery, apparatus, and supplies; iron and steel and its subclassification, bolts, nuts, etc.; hosiery and knit goods; cloth gloves; lumber and its products; rubber products and its subclassification, rubber tires and tubes. Men's employment dropped more than women's in some classifications, including gas and electric fixtures and chemicals and allied products. Occasionally the decreases were the same for both sexes. In certain important industries there was only a slight drop for either sex, and in others there was increased employment.

In summary, during the war and the months immediately following the war, the Ohio figures show that there was considerable diversity in the trends of men's and women's employment. In some classifications women gained a position of increased importance among the wage earners and retained it to a greater or less extent throughout the period studied. In other classifications the increased importance of women resulting from the war was only a temporary situation and did not last beyond the period of economic necessity that brought it about. To what extent the first or second of these applies is of real importance in studying the development of women's employment. Only detailed employment figures by sex will furnish a basis of adequate information about such tendencies. The great diversity of trends throughout the war period in the various industrial classifications gives added emphasis to the need for separate employment figures by sex if proper understanding of, and provision for, the development of women's employment opportunities is to be undertaken.

## The Depression of 1920-21

Second in importance only to the war in its effect on trends of employment was the depression of 1920-21, that hit industry to a greater or less degree all over the United States. On the whole, this depression showed several variations in the trend of men's and women's employment. From the most inclusive curve, which shows the figures for all employees, it appears that the depression, as reflected in a decrease of employment, started for both sexes about the same time, around the middle of the year 1920; that the ensuing decrease of employment was more severe for the men than for the women; and that recovery started for both sexes in about the middle of 1921 but was at first slightly more rapid for women than for men. In the classifications that make up the group of all employees the effect of the depression does not seem to resemble consistently the trends indicated in the larger classification. The course of employment seems to vary for men and women most directly with the type of occupation in which they are classified, and these variations are many.

Of particular value when the Nation is confronted with an acute unemployment situation is the ability to predict whether the problem of unemployment is going to strike first at the woman or at the man wage earners, and during a period of depression it is equally valuable to know whether it is for men or for women that relief will come first. This would be made possible by adequate and comparable employment statistics by sex, but if the figures available are for the two sexes combined the essential units in any constructive program for the prevention and relief of unemployment will not be available.

## Strikes

Another factor bringing about considerable variation in the trends of men's and women's employment in manufacturing industries is the occurrence of strikes. The 11-year period under discussion in Ohio saw many instances of trade disputes and strikes in the various industries for which figures have been presented.

Some of these, notably the great steel strike, affected women to only a very minor extent. Others, as the series of strikes in October and November of 1922 in the manufacture of pottery, terra cotta, and fire-clay products, affected women's employment much more seriously than men's. In short, strikes influence employment of men and women to varying degrees, and employment figures classified by sex are essential if these variations are to be shown.

## Industrial Developments

But the key to the development or retardation of women's opportunity lies in the influence of changing industrial practices and developments in the use of machinery. It is the part played by these changes and developments that must be understood if the wisest use of women in industry is to be achieved.

For example, the figures for the tobacco industry show a considerable decrease for male wage earners over the 11-year period and a very much increased proportionate importance of women. This is the result of more than one factor, but probably it illustrates chiefly the effect of recent developments in cigar making. Beginning about

1919 this industry has been revolutionized by the introduction of machines. Forced into their use by the acute shortage of labor in 1919, manufacturers adopted them more and more widely. For the new work the manufacturers preferred girls, because they were quicker, neater, and more economical. This development of the importance of women in the cigar industry is of great significance, and it is clearly illustrated by the employment curves differentiated by sex.

In the manufacture of boots and shoes, the development of fancier styles has been accompanied by the increased proportionate employment of women, as they are used for the stitching of shoes, and this work has increased greatly with the modern styles.

In telephone employment, on the other hand, women are becoming of less importance. Here, where for many years women have been a most important factor, the introduction of automatic telephones is apparently decreasing their employment.

Other classifications show other industrial influences at work to vary the trends of man and woman workers. The comparative newness of the automobile and electrical manufacturing industries has resulted in more experimentation with women and resultingly great fluctuations in their employment when compared with men's; while the long-established methods and more standardized products of the clothing industries apparently have produced a greater degree of similarity in the ups and downs of employment for the two sexes.

Whatever these far-reaching influences of industrial change may have been and may continue to be, their full effect will not be disclosed until it is possible to consult and compare figures showing the trend of employment for each sex separately. The part the woman wage earner is playing in the great drama of industrial development is of enormous significance not only to industry but to the social structure of the Nation, and any information which is available and which will contribute to a fuller understanding of the situation merits attention.



# INDUSTRIAL AND LABOR CONDITIONS

## Labor Conditions in the Automobile Industry in Germany

By FRITZ KUMMER, STUTTGART

**A**LTHOUGH the automobile industry belongs among the smaller industries of Germany, it has occupied a prominent place in public discussion, especially during the past year. This is explained by a number of circumstances but primarily by the depressed conditions of the industry. Some establishments have stopped motor-car production entirely, some are working on a short-time basis, and only in the case of a very few are activities at all normal. The situation would have been still worse if several plants had not received financial assistance from abroad. Foreign capital is heavily invested in the German automobile industry although the estimates disagree as to the exact amount.

Foreign capital enters the automobile industry of Germany through three channels: First, through loans and sales of stock; second, through the erection of plants for the assembling of cars from parts which are entirely or almost entirely produced abroad (there being now 9 such establishments—7 American and 2 French—with about 3,500 workers); third, through the establishment of plants in which complete cars are built from raw materials of German origin. Two organizations of the latter character were started during the past year. The General Motors Corporation bought the majority of the stock (amounting to 120,000,000 marks (\$30,560,000)) of the largest and best-organized automobile works in Germany, the Opel Works in Russelsheim on Main, and soon afterwards took over its direct control. The General Motors was followed by the Ford Co. The latter built an entirely new plant near Köln on the Rhine, in which about 1,000 workers will be employed. Both of these plants are conveniently located geographically, especially the Ford plant, which is on the Rhine, a much-used waterway, and on the outskirts of the most important German iron and coal region.

These two American plants would be able, it is stated, to supply the entire European market from Germany. However, their actual business prospects in Europe are declared by specialists to be not very favorable, for plants of such size and mass-production ability lack markets. In Europe, the vast majority of the population have a very limited income and therefore only a few people can be considered as being interested in the purchase of automobiles. In addition, the taxes and running expenses of a motor car are relatively much higher in Europe than in the United States, and on that account the automobile is much less used in Europe than in America.

Although Germany has a splendid highway system and also an old automobile industry, yet in 1929 there was only one automobile for every 53 persons in that country.

Table 1 shows the number of motor vehicles of various kinds produced in Germany in 1925 and 1928 and the percentages of increase between these years:

TABLE 1.—DEVELOPMENT OF AUTOMOBILE INDUSTRY IN GERMANY FROM 1925 TO 1928

Type of car	Number produced		Per cent of increase from 1925 to 1928
	1925	1928	
Passenger cars.....	47,847	108,143	126.0
Trucks.....	12,645	27,750	119.5
Auto buses.....	2,379	2,010	15.5
Other vehicles.....	7,246	11,230	55.9
Motors.....	15,058	18,306	21.6
Low-power motor cycles.....	7,179	61,504	756.7
High-power motor cycles.....	48,783	100,708	106.4

<sup>1</sup> Decrease.

The data in the above table include motor cars assembled in Germany from parts of foreign make, principally passenger cars, so that the German production is actually less than the above figures show. In regard to the number of motor cars of foreign make in Germany no official data are available. According to an estimate by the General Motors, the per cent the foreign cars formed of the total was in the various years, as follows:

	Passenger cars	Trucks
1921.....	2.6	0.9
1925.....	17.6	10.5
1928.....	37.4	29.9
1929 <sup>1</sup> .....	38.5	33.4

<sup>1</sup> For the first 9 months.

The rapid growth of the low-power motor cycles indicates the need of this type of modern vehicle under German income standards. The low-power motor cycle is the automobile of the German work-people. Its price and cost of upkeep accords with the income of the better-paid workers. Besides, this type of car is tax free. The increase of high-power motor cycles has been relatively seven times less than the increase of low-power motor cycles. The owners of the motor cycles are the prospective buyers of passenger cars, when these become low enough in price to enable the skilled workers and salaried employees to buy them.

The German industrial census of January 16, 1925, showed that there were engaged in Germany in the building of automobiles (motor cycles and automobiles) altogether 95,920 persons, in 790 establishments. The latest published data of the organization of the German automobile employers (*Reichsverband der Deutschen Automobil Industrie*) place the aggregate number of persons engaged in the automobile industry at about 90,000, and according to the data published by the German Metal Workers' Federation on September 1, 1929, there were engaged in the automobile industry in Germany 116,363 persons (97,143 wage earners and 19,220 salaried employees).

But all these numbers are too high. For it often happens that persons though working in the automobile shops are also engaged at times in making things other than automobiles or their parts. In the tabulation of the German Metal Workers' Federation for April and September, 1929, the number of workers engaged in actual car construction is separately presented, as follows:

TABLE 2.—NUMBER OF WORKERS EMPLOYED IN AUTOMOBILE INDUSTRY, AND ACTUALLY ENGAGED IN PRODUCTION OF MOTOR CARS, IN GERMANY, ON SPECIFIED DATES

Class of workers	Number of workers employed in—							
	Automobile industry				Actual production of motor cars			
	Apr. 1, 1929	Sept. 1, 1929	Decrease		Apr. 1, 1929	Sept. 1, 1929	Decrease	
			Num-ber	Per cent			Num-ber	Per cent
Wage earners.....	107,913	97,143	10,770	10.0	51,196	44,790	6,406	12.5
Salaried employees.....	19,553	19,220	333	1.7	9,235	8,948	287	3.1
Total.....	127,466	116,363	11,103	8.7	60,431	53,738	6,693	11.1

Thus there were on April 1, 1929, in the entire German automobile industry 127,466 persons and in motor-car building alone 60,431 persons. It is also of interest to note that both these groups decreased during the five months under review by 11,103 and 6,693 persons, respectively. This decrease has continued since September 1, 1929.

The 53,738 persons who were engaged in motor-car building alone on September 1, 1929, were distributed among 52 establishments. The exact number is a little higher, but the few establishments not included in the inquiry are very limited in number and do not play any industrial rôle worth mentioning. Even among the 52 establishments covered by this compilation there are a number of very small size, as the following figures show:

TABLE 3.—SIZE OF AUTOMOBILE PLANTS IN GERMANY, CLASSIFIED BY NUMBER OF EMPLOYEES

Workers per establishment	Establishments		Workers	
	Number	Per cent of total	Number	Per cent of total
200 or less.....	17	32.7	1,787	4.0
201 to 1,000.....	21	40.4	10,264	22.9
Over 1,000.....	14	26.9	32,739	73.1
Total.....	52	100.0	44,790	100.0



The industrial importance of the establishments is also indicated by the number of the cars produced. Data on this point are available for 45 of the 52 establishments under review, as follows:

TABLE 4.—AUTOMOBILE PLANTS IN GERMANY CLASSIFIED ACCORDING TO MONTHLY PRODUCTION OF CARS

Cars produced per month per establishment	Establishments		Output of cars	
	Number	Per cent of total	Number	Per cent of total
50 or less.....	12	26.7	200	1.5
51 to 100.....	7	15.6	483	3.6
101 to 300.....	13	28.9	2,663	19.6
301 to 1,000.....	11	24.4	5,435	40.9
Over 1,000.....	2	4.4	4,579	34.4
Total.....	45	100.0	13,300	100.0

Of the 44,790 workers engaged in motor-car building, 25,336 (or 56.6 per cent) are skilled workers, 9,618 (21.5 per cent) are semi-skilled, 5,242 (11.7 per cent) are unskilled, 1,394 (3.1 per cent) are women, and 3,200 (7.1 per cent) are apprentices.

The inquiry of the Metal Workers' Federation covered the form of wage payment (whether by time or piece) as well as the actual earnings. Piecework is more common than time-work in the automobile industry in Germany, and 80.8 per cent of the 42 establishments reporting operate on this basis. As in these 42 establishments 97.7 per cent of the workers are employed, one may say that the vast majority of the automobile workers are engaged on a piece basis. In a number of establishments the time-work is extensive; also it should be pointed out that there is much time-work in the processes in which the work is done on running conveyors.

In the German automobile industry wage rates, working hours, holidays, etc., are regulated through collective agreements concluded between the organizations of workers and their employers. But the wage rates established under the agreements do not give an accurate indication of how much a worker actually earns, for the agreed wage schedule is supplemented by various additions. To give an approximate picture of the actual earnings of the automobile workers, the earnings of pieceworkers must be analyzed. These fluctuate from establishment to establishment, the outside limits being from 0.70 to 2 marks (17 to 48 cents) per hour for the skilled, from 0.65 to 1.30 marks (15 to 31 cents) for the semiskilled, from 0.71 to 1.30 marks (17 to 31 cents) for the unskilled, and from 0.46 to 1.30 marks (11 cents to 31 cents) for female workers per hour. In each of these four groups, however, the two extremes are seldom met.

In the 47 establishments reporting wage data, the piecework earnings per hour were as follows:

TABLE 5.—AVERAGE HOURLY EARNINGS OF PIECEWORKERS IN AUTOMOBILE PLANTS IN GERMANY

Hourly earnings	Number of establishments			
	Skilled	Semi-skilled	Unskilled	Female workers
Under 0.75 mark (18 cents).....	1	1	4	4
0.75 to 1 mark (18 to 24 cents).....	6	10	20	6
1.01 to 1.25 marks (24 to 30 cents).....	23	24	6	.....
1.26 to 1.50 marks (30 to 36 cents).....	14	4	1	.....
Over 1.50 marks (36 cents).....	3	.....	.....	.....

Only a comparatively small number of the skilled and semiskilled workers on a piecework basis earn less than 1 mark (24 cents) per hour.

The automobile workers in Germany are well organized. However, the business depression, with the complete stoppage of some plants and the partial stoppage of others, and the increasing employment of unskilled and female workers have affected adversely the number of the organized workers, particularly in certain establishments. At the time of the inquiry under review (September 1, 1929) 70.6 per cent of automobile workers were organized; in 26 establishments the per cent of organized workers was over 70.6, and in some establishments it was even 100. In the rest of the plants, that is, in 26, the number of the organized workers fluctuated between 10.6 and 70.2 per cent. In some works which belong to the American companies, for instance, Ford and Graham-Paige, only 10.6 and 13.1 per cent of the workers were organized. This is the situation as regards the total of all occupations in the automobile industry. By individual occupations the percentages of the organized workers are as follows: Woodworkers, 78.4 per cent; painters, 91.5 per cent; upholsterers, 54.7 per cent; metal workers of all occupations, 63.8 per cent. The organized workers of this industry are divided into 7 national unions, although the vast majority (77.8 per cent) belong to the metal workers' union, in which are organized all workers, skilled and unskilled, engaged in metal work.

### Annual Meeting of Governmental Officials in Industry

THE seventeenth annual convention of the Association of Governmental Officials in Industry of the United States and Canada was held in Louisville, Ky., May 20 to 23, 1930. Among the papers presented at this meeting were the following: Some lines of attack upon the problems of unemployment, need for obtaining uniformity in labor laws among States and Provinces, need for uniformity in labor-industrial relation laws and administration, specific methods of factory inspection, major issues in labor law enforcement, reasons for labor laws protecting women and children, problems confronting an inspector, industrial-labor disputes, age and employability, and labor camps.

At the session on safety codes two reports were submitted, one on State and national aspects of the safety code movement and the

other from the committee appointed to urge States to adopt American Standards Association standards.

James H. H. Ballantyne, Deputy Minister of the Ontario Department of Labor, was elected president of the Association of Government Officials for the next year and Miss Louise E. Schutz, superintendent of the division of women and children, industrial commission, Minnesota, will again serve as secretary-treasurer.

It was voted to hold the convention of 1931 in Boston.

The proceedings of the 1930 meeting will be published by the United States Bureau of Labor Statistics.



## UNEMPLOYMENT SURVEYS

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### Unemployment in Cincinnati, May, 1930

**A**N EMPLOYMENT census conducted jointly by the Cincinnati Department of Public Welfare and the Board of Education showed that 8.2 per cent of the employable population of the city of Cincinnati were unemployed during the month of May, 1930. The census showed that an additional 9.8 per cent were employed only part time and that the remaining 82 per cent had steady full-time employment.

A similar census was conducted in Cincinnati last May. A comparison of the two reports shows that the amount of unemployment in May, 1930, was approximately twice as large as for the same month of last year, when after deducting the "unemployables" from the unemployed it was found that less than 5 per cent of the working population were unemployed. Comparisons of the figures on those working part time also showed that the number for this May was twice as large as for last May.

For the purposes of the census the city was divided into 106 tracts. The extent of unemployment in each of these tracts was by no means uniform. It was found, for instance, that in some of the tracts in the so-called "bottoms" nearly a third of the working population was unemployed. On the other extreme was Tract No. 81 in College Hill in which all employable persons were reported as having regular full-time employment. In a number of other tracts less than 2 per cent of the working population was found to be totally unemployed.

The census was the result of a house-to-house canvass, and it covered 108,396 employables, i. e., persons actually working or who would be working if they could obtain employment.

The most recent figures give the working population of Cincinnati as 156,000. Using the rate of unemployment shown by the census and applying it to this figure gives a total for the city of 12,792 unemployed. This, however, would not include those employed only part time, of which there would be 15,288 more.

It is believed that the committee on stabilizing employment was an important factor in keeping the number of those totally unemployed this past winter at a comparatively lower per cent than for most other American cities. Realizing that a severe depression was approaching, the committee last fall urged all local employers to reduce the hours of work rather than the number of workmen if they could not avoid a reduction in their plants. If local employers had not responded to this request as they did, the number of those totally unemployed would have been much larger, and the number of those on a part-time basis smaller.

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### Unemployment in Philadelphia, April, 1930

**U**NEMPLOYMENT in Philadelphia was more than 40 per cent heavier in April, 1930, than in the same period in 1929, according to a house-to-house survey of 36,100 families made in the last week

in April by the Bureau of Compulsory Education and the Industrial Research Department of the University of Pennsylvania. Of 71,895 employable persons in these families, 8,377, or 11.7 per cent, were unemployed because of inability to find work. In addition, 2.7 per cent were out of work because of sickness or other causes, making a total unemployment of 14.4 per cent. This compares with 7.8 per cent unable to find work in April, 1929, and total unemployment of 10.4 per cent at that time.

As the recent canvass covered approximately 7.5 per cent of Philadelphia's families, it is probably representative of the entire working population. Calculated on this basis for an estimated total of more than 900,000 workers in Philadelphia, over 105,000 wage earners were unemployed because of inability to find work in April, 1930, as compared with about 73,000 in 1929. Total number unemployed, including the number unemployed because of sickness and other causes, amounted to more than 125,000.

The canvass, which covered 166 school census blocks in all parts of the city, revealed that the worst conditions of unemployment existed in South Philadelphia and in Kensington. School district 3 in South Philadelphia, east of Broad Street and south of Washington, had 19.7 per cent of the workers unable to find work as compared with 14.5 per cent in 1929. Conditions were also bad in district 7 which includes Kensington, where 17.4 per cent were unemployed because of lack of work in April, 1930, as compared with 11.4 per cent in April, 1929. Unemployment was also serious in district 6 in the east central part of the city where 15 per cent were unable to find jobs; in district 10 with 12.4 per cent; in district 5 with 12.3 per cent. The latter district includes the territory between Market Street and Allegheny Avenue and between Broad Street and the Schuylkill, while district 10 includes the northeastern part of the city.

Unemployment was lightest in district 1, south of Market Street and west of the Schuylkill, where only 6.2 per cent were jobless because of lack of available work. In district 2, west of Broad Street and south of Market Street, 8.8 per cent were out of work, while in district 8, which includes Chestnut Hill, Manayunk, and northwestern Philadelphia, 9.5 per cent of the workers were out of a job because no work was available.

In general the industrial sections along the Delaware River, extending from South Philadelphia to Kensington, Frankford, and Bridesburg, which had the greatest unemployment in 1929 also reported the largest numbers out of work this spring.

The largest increases in unemployment between 1929 and 1930 occurred in district 9, which is east of Broad Street and north of Lehigh and Kensington Avenues, and in district 8 which adjoins it to the west and includes the Manayunk industrial section. In district 9 more than twice as many were unable to find jobs in 1930 as in 1929—10 per cent as compared with 4.5 per cent—while district 8 had 9.5 per cent out of a job this spring, as compared with only 4.9 per cent in April of last year. District 2, the western part of South Philadelphia, showed the greatest stability of employment with 8.8 per cent unable to find work this year as compared with 8.5 per cent last year—an increase in unemployment of only 4 per cent. In other districts the number of workers unable to find jobs

increased between 1929 and 1930 by percentages ranging approximately from 30 to 85.

This recent survey shows that unemployment in Philadelphia was probably much more severe in April, 1930 than at any time since the depression of 1921-22. Considerable encouragement, however, is found in the fact that in all of the 10 school districts the supervisors directing the survey reported that the worst of the unemployment had passed at the time the canvass was made in the last week in April. Families in all sections of the city reported an improvement in labor conditions since the latter part of the winter, and many wage earners who were out of work during February and March had found jobs during the first three weeks of April, just prior to the time the canvass was made. This betterment in the employment situation partly reflects the usual spring revival as well as some industrial expansion.

A detailed analysis of the results of this survey, and a comparison with conditions existing in April, 1929 is being prepared by the Industrial Research Department and will be published within the next few months.

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### Unemployment in Bloomington, Ind., February, 1930

IN THE latter part of February, 1930, a questionnaire-interview survey of unemployment was made by the Bloomington Free Employment Bureau, in cooperation with the Indiana University Department of Economics and the School of Commerce and Finance. A brief report on this investigation by Thomas W. Rogers, assistant professor of industrial and personnel management of the university, is summarized below.

The enumeration was done by students of the department of economics and the College of Commerce and Finance. Every home in the city was visited and it is estimated that replies were received from 85 to 90 per cent of the workers of the city.

It was found that 612 persons were not working; 542 of these were men and 70 were women. There were 608 working part time and 3,670 working full time. The 1930 census figures showed the total population of Bloomington to be in excess of 18,000. The estimated population of greater Bloomington is in excess of 20,000.

*Period out of work.*—Of the unemployed, 124 had been out of work a month or less, 81 from one to two months, 67 from two to three months, 55 from three to four months, and 161 for four months or over. Thus, 283 had been out of work two months or longer. There were 124 who did not state how long they had been out of work; of these, also, some may have been unemployed for two months or longer.

*Age distribution.*—The age distribution of the unemployed workers shows that 182 were 45 years of age or older; 67 of those answering the questionnaire did not give their age. If it is assumed that the age distribution of this 67 is the same as that of those who answered this question, 23 of the 67 persons would fall into the classification of 45 or older. This would make a total of 205 who were 45 years



or older. The following is a summary of the age distribution of those unemployed:

	Number
16 to 20 years of age-----	70
21 to 25 years of age-----	78
26 to 30 years of age-----	67
31 to 35 years of age-----	42
36 to 40 years of age-----	64
41 to 45 years of age-----	42
46 to 50 years of age-----	44
51 to 55 years of age-----	38
56 to 60 years of age-----	37
61 to 65 years of age-----	33
66 to 70 years of age-----	22
71 to 75 years of age-----	5
Over 75 years of age-----	3
No report-----	67
Total-----	612

*Dependents.*—A majority of the persons out of work had other persons depending upon them for their support. The answers reveal that 102 had one dependent, 114 had two dependents, 92 three dependents, 38 four dependents, and 75 had five or more dependents. Of those answering, 75 did not state the number of their dependents, while 115 stated that they had no dependents.

*Causes of unemployment.*—A study of the causes of unemployment provides some interesting information. Of those interviewed, 89.2 per cent gave information on this point, as follows:

NUMBER AND PER CENT IDLE ON ACCOUNT OF EACH SPECIFIED CAUSE, BY SEX

Cause of unemployment	Number unemployed			Per cent unemployed		
	Men	Women	Total	Men	Women	Total
Physical disability-----	77	10	87	15.8	17.3	15.9
Old age-----	36	5	41	7.4	8.6	7.5
Unable to find work-----	167	28	195	34.2	48.3	35.7
Laid off, bad weather-----	14	1	15	2.9	1.7	2.7
Laid off, no work-----	194	14	208	39.8	24.2	38.1
Total reporting-----	488	58	546	100.0	100.0	100.0
Not reporting-----	54	12	66			
Total unemployed-----	542	70	612			

Of those who did not give information on this point, 4 were farmers, 5 were laborers, 6 were woodworkers, 9 had no regular occupation, and the remaining 30 were scattered through 25 different occupations.

It may be noted from the above table that 23.4 per cent of those answering this question said they were out of work because of physical disability and old age. This leaves 76.6 per cent who are out of work due to economic causes but are apparently physically fit for work; approximately one-half of this group were laid off due to lack of work.

The physically disabled were scattered among a large number of occupational groups. The largest occupational groups among the 77 men physically disabled were those of carpenter (4), farmer (9),

laborer (10), machinist (4), stone worker (11), teacher (3), and railroad worker (5). Four had no regular occupation. The total number of physically disabled among these occupations was 50. The remaining 27 who were unemployed due to physical disability were scattered among 21 other occupations. The 10 women physically disabled gave their occupations as follows: Bookkeeper (1), clerk (2), cook (2), housekeeper (3), nurse (1), and saleswoman (1). No tabulation was made of the ages of those physically disabled.

The principal occupations given by the 36 men unemployed because of old age were carpenter (7), farmer (8), retired (6), and stone worker (2)—a total of 26. The other 13 men gave 12 different occupations. The 5 women unemployed due to old age gave their occupations as housekeeper (2), and nurse (2); 1 had no occupation.

*Occupations.*—Among the 612 persons unemployed, 102 different occupations were listed. The largest industrial groups were the stone and furniture industries, 128 persons giving the former, and 46 persons the latter as the industry in which they usually were employed. These two groups represented approximately 32.1 per cent of the total number unemployed, showing the dependency of the local community upon these two industries.

Of the 128 persons giving occupations in the stone industry, 13 were physically disabled and 2 were out of work because of old age. Among the woodworking occupations, 2 were physically disabled and 1 was out of work due to old age.

Approximately 25 per cent of those unemployed in the furniture group said they were laid off because of lack of work, while the other 75 per cent stated they could not find a job. This indicates that approximately 75 per cent of those out of work in the furniture industry have permanently severed their relations with the old job and have no promise of being recalled should business conditions improve. The situation is different in the stone industry. Approximately 70 per cent of those physically able to work said they were laid off because of lack of work. This indicates that these workers expect to return to their former jobs when business conditions demand their return. The other 30 per cent said they could not find a job.

The answers to similar questions asked those working part time and those working full time are now being compiled and information, such as the above relative to these two groups will be available soon.

# UNEMPLOYMENT CONDITIONS AND PROBLEMS

## Fluctuation of Employment in Automobile Manufacturing and Related Industries in Ohio, 1923 to 1928

By FRED C. CROXTON, DEPARTMENT OF INDUSTRIAL RELATIONS OF OHIO, AND  
FREDERICK E. CROXTON, COLUMBIA UNIVERSITY

**T**HE manufacture of automobiles and auto parts and rubber tires and tubes employs approximately one-sixth (16.4 per cent in 1928) of the persons engaged in manufactures in Ohio.

The present article shows for Ohio the fluctuation of employment during the 6-year period, 1923 to 1928, in the manufacture of automobiles and auto parts, the manufacture of rubber tires and tubes, and in garages and automobile repair shops.

Wide annual fluctuations in employment occur in the manufacture of automobiles and auto parts, the variation from the maximum ranging from 17.9 to 41.3 per cent. The annual fluctuation in employment in the manufacture of rubber tires and tubes ranged from 8.7 to 33.4 per cent. In garages and automobile repair shops the variation from the maximum ranged from 9.9 to 21.8 per cent.

In 1928, there were 20,738, or 29.6 per cent, fewer persons employed in the manufacture of automobiles and auto parts in Ohio in January than in June; 5,405, or 8.7 per cent, fewer were employed in the manufacture of rubber tires and tubes in May than in September; and 2,063, or 10.2 per cent, fewer were employed in garages and automobile repair shops in January than in August.

The data showing fluctuation in employment are given for the entire State of Ohio. In addition details are given for Cuyahoga and Lucas Counties in the case of the manufacture of automobiles and auto parts, and for Summit County in the case of the manufacture of rubber tires and tubes, the counties in which the industries covered are of great importance.

The sources of the material are the tabulations compiled (but not published) by the division of labor statistics of the Department of Industrial Relations of Ohio for 1924 to 1927, and the division's published reports on Rates of Wages and Fluctuation of Employment for 1923 and 1928. The division's studies are based upon the annual reports required by law, since January 1, 1924, of all establishments in Ohio (except those engaged in interstate transportation and governmental agencies), regularly employing three or more persons, and in 1923 of all employing five or more. Only a very few establishments fail to report.

The total number of establishments reporting each year within each industry group included in this study is shown in Table 1.



TABLE 1.—NUMBER OF ESTABLISHMENTS REPORTING FLUCTUATION OF EMPLOYMENT IN AUTOMOBILE MANUFACTURING AND RELATED INDUSTRIES IN OHIO AND IN SELECTED COUNTIES, 1923 TO 1928

Industry and locality	1923	1924	1925	1926	1927	1928
Manufacture of automobiles and parts:						
State.....	198	195	185	187	203	186
Cuyahoga County.....	73	70	64	63	64	57
Lucas County.....	13	12	16	14	16	18
Manufacture of tires and tubes:						
State.....	75	63	54	55	54	47
Summit County.....	19	15	16	17	18	18
Garages and repair shops: State.....	802	1,062	1,242	1,468	1,624	1,771

This report includes wage earners, bookkeepers, stenographers and office clerks, and salespeople (not traveling). Table 2 shows for each general occupation group the amount paid in wages and salaries in Ohio in 1928 in the industry groups covered. Superintendents and managers are included in this table but not in the other tables given in this article.

TABLE 2.—AMOUNT PAID IN WAGES AND SALARIES IN OHIO IN AUTOMOBILE MANUFACTURING AND RELATED INDUSTRIES IN 1928

Occupation group	Manufacture of automobiles and auto parts	Manufacture of rubber tires and tubes	Garages and automobile repair shops
Wage earners.....	\$98,947,725	\$87,849,555	\$19,574,658
Bookkeepers, stenographers, and office clerks.....	6,952,019	13,108,215	4,432,215
Sales people (not traveling).....	243,677	97,884	7,219,094
Superintendents and managers.....	3,451,435	2,124,081	4,452,840
Total.....	109,594,856	103,179,735	35,778,807

Table 3 shows the average number of persons reported employed in Ohio in the three industry groups covered, in each of the years, 1923 to 1928.

TABLE 3.—AVERAGE NUMBER OF PERSONS (BOTH SEXES) REPORTED EMPLOYED IN AUTOMOBILE MANUFACTURING AND RELATED INDUSTRIES IN OHIO, 1923 TO 1928

Year	Manufacture of automobiles and auto parts	Manufacture of rubber tires and tubes	Garages and automobile repair shops	Year	Manufacture of automobiles and auto parts	Manufacture of rubber tires and tubes	Garages and automobile repair shops
1923.....	55,738	47,811	11,817	1926.....	52,119	55,053	19,168
1924.....	43,550	47,111	14,486	1927.....	48,936	58,466	18,123
1925.....	53,646	56,133	16,204	1928.....	63,197	59,314	19,382

#### Manufacture of Automobiles and Auto Parts

TABLE 4 shows the maximum and minimum employment in the manufacture of automobiles and auto parts in each of the six years. The data are shown by sex for the entire State and for Cuyahoga and Lucas Counties. These counties are the principal centers in the State for this industry group. The city of Cleveland is in Cuyahoga County and the city of Toledo in Lucas County. In Lucas County in 1928 the average number reported employed in the manufacture of automobiles and auto parts was 42.5 per cent of the average number reported employed in all manufactures in that county.

TABLE 4.—MAXIMUM AND MINIMUM EMPLOYMENT IN MANUFACTURE OF AUTOMOBILES AND AUTOMOBILE PARTS, 1923 TO 1928, BY SEX

*Entire State*

Sex and year	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<b>Males:</b>						
1923.....	56,705	May.....	46,255	October.....	10,450	18.4
1924.....	53,657	March.....	30,550	November.....	23,107	43.1
1925.....	53,922	May.....	42,542	January.....	11,380	21.1
1926.....	53,425	June.....	40,713	December.....	12,712	23.8
1927.....	53,690	April.....	35,004	November.....	18,686	34.8
1928.....	64,132	June.....	45,042	January.....	19,090	29.8
<b>Females:</b>						
1923.....	5,114	July.....	4,373	January.....	741	14.5
1924.....	4,207	March.....	3,130	August.....	1,077	25.6
1925.....	4,534	May.....	3,672	January.....	862	19.0
1926.....	4,531	June.....	3,384	December.....	1,147	25.3
1927.....	4,430	June.....	3,385	December.....	1,045	23.6
1928.....	5,905	June.....	4,257	January.....	1,648	27.9
<b>Both sexes:</b>						
1923.....	61,769	May.....	50,714	October.....	11,055	17.9
1924.....	57,864	March.....	33,955	November.....	23,909	41.3
1925.....	58,456	May.....	46,214	January.....	12,242	20.9
1926.....	57,956	June.....	44,097	December.....	13,859	23.9
1927.....	58,082	April.....	38,411	November.....	19,671	33.9
1928.....	70,037	June.....	49,299	January.....	20,738	29.6

*Cuyahoga County*

<b>Males:</b>						
1923.....	22,091	April.....	16,696	November.....	5,395	24.4
1924.....	20,737	March.....	14,629	November.....	6,108	29.5
1925.....	22,118	November.....	16,883	January.....	5,235	23.7
1926.....	22,311	September.....	17,813	December.....	4,498	20.2
1927.....	21,794	May.....	11,384	November.....	10,410	47.8
1928.....	18,328	May.....	15,326	January.....	3,002	16.4
<b>Females:</b>						
1923.....	1,224	June-July.....	901	December.....	233	19.0
1924.....	1,102	March.....	931	December.....	171	15.5
1925.....	1,326	October.....	989	January.....	337	25.4
1926.....	1,232	January.....	1,049	December.....	183	14.9
1927.....	1,178	May.....	802	December.....	376	31.9
1928.....	1,087	September.....	871	January.....	216	19.9
<b>Both sexes:</b>						
1923.....	23,252	April.....	17,711	November.....	5,541	23.8
1924.....	21,839	March.....	15,645	November.....	6,194	28.4
1925.....	23,345	November.....	17,872	January.....	5,473	23.4
1926.....	23,465	September.....	18,865	December.....	4,600	19.6
1927.....	22,972	May.....	12,210	November.....	10,762	46.8
1928.....	19,375	May.....	16,197	January.....	3,178	16.4

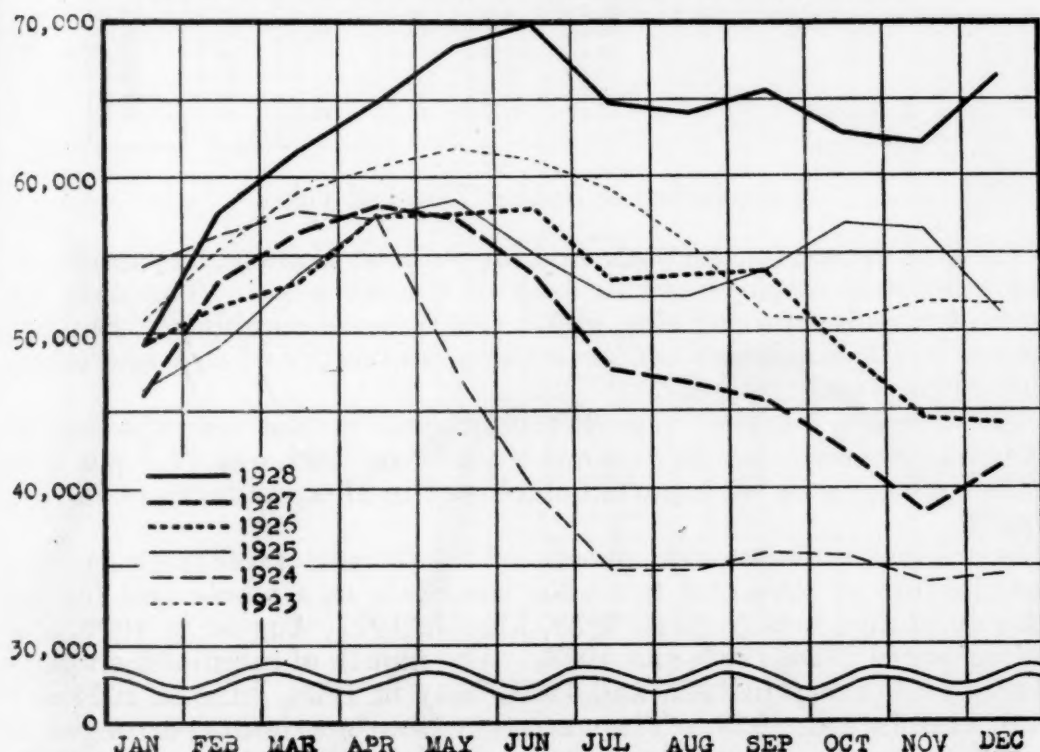
*Lucas County*

<b>Males:</b>						
1923.....	15,217	July.....	10,239	January.....	4,978	32.7
1924.....	15,092	April.....	863	December.....	14,229	94.3
1925.....	17,061	May.....	11,310	January.....	5,751	33.7
1926.....	17,941	June.....	10,524	November.....	7,417	41.3
1927.....	16,309	March.....	10,709	December.....	5,600	34.3
1928.....	26,180	June.....	14,328	January.....	11,852	45.3
<b>Females:</b>						
1923.....	1,474	May.....	1,014	October.....	460	31.2
1924.....	1,403	March.....	726	July.....	677	48.3
1925.....	1,577	May.....	1,056	January.....	521	33.0
1926.....	1,664	April.....	1,005	November.....	659	39.6
1927.....	1,396	March.....	1,008	August.....	388	27.8
1928.....	2,642	May.....	1,518	January.....	1,124	42.5
<b>Both sexes:</b>						
1923.....	16,654	July.....	11,313	January.....	5,341	32.1
1924.....	16,473	April.....	1,848	December.....	14,625	88.8
1925.....	18,638	May.....	12,366	January.....	6,272	33.7
1926.....	19,599	June.....	11,529	November.....	8,070	41.2
1927.....	17,705	March.....	11,764	December.....	5,941	33.6
1928.....	28,809	June.....	15,846	January.....	12,963	45.0

As the table shows, the month of maximum employment in the entire State for both sexes combined was March in 1924, April in 1927, May in 1923 and 1925, and June in 1926 and 1928. The month of minimum employment was January in 1925 and 1928, October in 1923, November in 1924 and 1927, and December in 1926. The maximum was reached each year during the spring or early summer and the minimum during the late fall or midwinter. The variation from maximum, arranged in ascending order, was 17.9 per cent in 1923, 20.9 in 1925, 23.9 in 1926, 29.6 in 1928, 33.9 in 1927, and 41.3 in 1924. The variation from maximum was greater for males than for females in each of the years except 1926.

For the sexes combined, the month of maximum employment in Cuyahoga County was March in 1924, April in 1923, May in 1927

CHART 1.—FLUCTUATION OF EMPLOYMENT OF BOTH SEXES IN THE MANUFACTURE OF AUTOMOBILES AND AUTOMOBILE PARTS, 1923-1928



and 1928, September in 1926, and November in 1925. The month of minimum employment was January in 1925 and 1928, November in 1923, 1924, and 1927, and December in 1926. The variation from maximum was 16.4 per cent in 1928, 19.6 in 1926, 23.4 in 1925, 23.8 in 1923, 28.4 in 1924, and 46.8 in 1927.

The month of maximum employment for both sexes combined in Lucas County was March in 1927, April in 1924, May in 1925, June in 1926 and 1928, and July in 1923. The month of minimum employment was January in 1923, 1925, and 1928, November in 1926, and December in 1924 and 1927. The variation from maximum, arranged in ascending order, was 32.1 per cent in 1923, 33.6 in 1927, 33.7 in 1925, 41.2 in 1926, 45.0 in 1928, and 88.8 in 1924.

Chart 1 presents graphically the course of employment in the manufacture of automobiles and parts, for the State as a whole, over the six-year period, for both sexes.



Table 5 compares in summary manner the variation from the maximum number employed in the manufacture of automobiles and auto parts in the State as a whole, in Cuyahoga County, and in Lucas County. The per cent of variation from maximum is very much greater in Lucas County than in Cuyahoga County in five of the six years. In 1927 the variation was decidedly higher in Cuyahoga than in Lucas County.

TABLE 5.—PER CENT OF VARIATION FROM MAXIMUM EMPLOYMENT IN MANUFACTURE OF AUTOMOBILES AND AUTO PARTS, 1923 TO 1928, BY SEX

Year	Males			Females			Both sexes		
	State	Cuyahoga County	Lucas County	State	Cuyahoga County	Lucas County	State	Cuyahoga County	Lucas County
1923.....	18.4	24.4	32.7	14.5	19.0	31.2	17.9	23.8	32.1
1924.....	43.1	29.5	94.3	25.6	15.5	48.3	41.3	28.4	88.8
1925.....	2.1	23.7	33.7	19.0	25.4	33.0	20.9	23.4	33.7
1926.....	23.8	20.2	41.3	25.3	14.9	39.6	23.9	19.6	41.2
1927.....	34.8	47.8	34.3	23.6	31.9	27.8	33.9	46.8	33.6
1928.....	29.8	16.4	45.3	27.9	19.9	42.5	29.6	16.4	45.0

### Manufacture of Rubber Tires and Tubes

TABLE 6 shows, for the State and for Summit County, the maximum and minimum employment in each of the six years. The data are shown for males, for females, and for both sexes combined. Summit County is the important center in the manufacture of tires and tubes, with Akron the principal city.

The average number reported employed in the manufacture of rubber tires and tubes in Summit County in 1928 was 77.7 per cent of the average number reported employed in all manufactures in that county.

As the table shows, the month of maximum employment in the manufacture of tires and tubes for the State as a whole and for the sexes combined was April in 1923, May in 1927, August in 1925, and September in 1924, 1926, and 1928. The month of minimum employment was January in 1925 and 1927, May in 1928, June in 1924 and 1926, and July in 1923. The variation from maximum, arranged in ascending order, was 8.7 per cent in 1928, 9.3 in 1926, 10.3 in 1927, 16.2 in 1925, 16.6 in 1924, and 33.4 in 1923.

In Summit County the month of maximum employment did not occur at any common season. It came for both sexes combined in January in 1926, April in 1923, July in 1927, August in 1925, September in 1924, and November in 1928. The month of minimum employment was January in 1925 and 1927, May in 1928, June in 1924 and 1926, and July in 1923. The variation from maximum arranged in ascending order was 9.3 in 1928, 9.5 in 1927, 9.6 in 1926, 16.1 in 1925, 17.4 in 1924, and 36.2 in 1923.

The course of employment in the State as a whole in this industry group is shown graphically in Chart 2 on page 46.

TABLE 6.—MAXIMUM AND MINIMUM EMPLOYMENT IN MANUFACTURE OF RUBBER TIRES AND TUBES IN OHIO, 1923 TO 1928, BY SEX

*Entire State*

Sex and year	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
Males:						
1923.....	48,294	April.....	30,491	July.....	17,803	36.9
1924.....	43,937	September..	36,536	June.....	7,401	16.8
1925.....	50,980	August.....	42,728	January....	8,252	16.2
1926.....	48,306	September..	43,592	December....	4,714	9.8
1927.....	50,873	May.....	45,251	November....	5,622	11.1
1928.....	50,423	September..	46,624	January.....	3,799	7.5
Females:						
1923.....	7,826	April.....	6,251	January.....	1,575	20.1
1924.....	7,973	December....	6,223	July.....	1,750	21.9
1925.....	9,823	September..	8,192	January.....	1,631	16.6
1926.....	9,948	September..	8,986	July.....	962	9.7
1927.....	11,403	September..	9,693	January.....	1,710	15.0
1928.....	12,213	December....	9,972	May.....	2,241	18.3
Both sexes:						
1923.....	56,120	April.....	37,377	July.....	18,743	33.4
1924.....	51,453	September..	42,906	June.....	8,547	16.6
1925.....	60,783	August.....	50,920	January.....	9,863	16.2
1926.....	58,254	September..	52,832	June.....	5,422	9.3
1927.....	61,385	May.....	55,047	January.....	6,338	10.3
1928.....	62,225	September..	56,820	May.....	5,405	8.7

*Summit County*

Males:						
1923.....	41,553	April.....	24,800	July.....	16,753	40.3
1924.....	37,340	September..	30,723	June.....	6,617	17.7
1925.....	44,630	August.....	37,497	January.....	7,133	16.0
1926.....	42,378	January.....	38,213	June.....	4,165	9.8
1927.....	43,998	June.....	39,741	January.....	4,257	9.7
1928.....	45,284	October....	42,011	May.....	3,273	7.2
Females:						
1923.....	7,236	April.....	5,715	January.....	1,521	21.0
1924.....	7,367	December....	5,600	July.....	1,767	24.0
1925.....	9,170	August.....	7,663	January.....	1,507	16.4
1926.....	9,345	September..	8,418	July.....	927	9.9
1927.....	10,714	September..	9,019	January.....	1,695	15.8
1928.....	11,784	December....	9,446	May.....	2,338	19.8
Both sexes:						
1923.....	48,789	April.....	31,119	July.....	17,670	36.2
1924.....	44,166	September..	36,479	June.....	7,687	17.4
1925.....	53,800	August.....	45,160	January.....	8,640	16.1
1926.....	51,652	January.....	46,673	June.....	4,979	9.6
1927.....	53,856	July.....	48,760	January.....	5,096	9.5
1928.....	56,705	November..	51,457	May.....	5,248	9.3

**Garages and Automobile Repair Shops**

TABLE 7 shows for the State the variation in employment in garages and automobile repair shops during the 6-year period. As already stated, reports were required from establishments normally employing three or more persons during 1924 to 1928 and five or more during 1923. One-man and two-man garages are, therefore, not included except in a few instances where reports were received. Where an automobile sales agency is combined with a repair service department it is included in this industry group.

The month of maximum employment for both sexes combined was April in 1927, May in 1924, June in 1926, August in 1925 and 1928, and September in 1923. The month of minimum employment was January in each year except 1924 when it was December. Variation from maximum, arranged in ascending order, was 9.9 per cent in 1924, 10.2 in 1928, 10.9 in 1927, 11.9 in 1925, 13.3 in 1926, and 21.8 in 1923.

The variation was less each year for females than for males. The females, however, are almost all in clerical work and the males are wage earners or salesmen.

CHART 2.—FLUCTUATION OF EMPLOYMENT OF BOTH SEXES IN THE MANUFACTURE OF RUBBER TIRES AND TUBES, 1923-1928

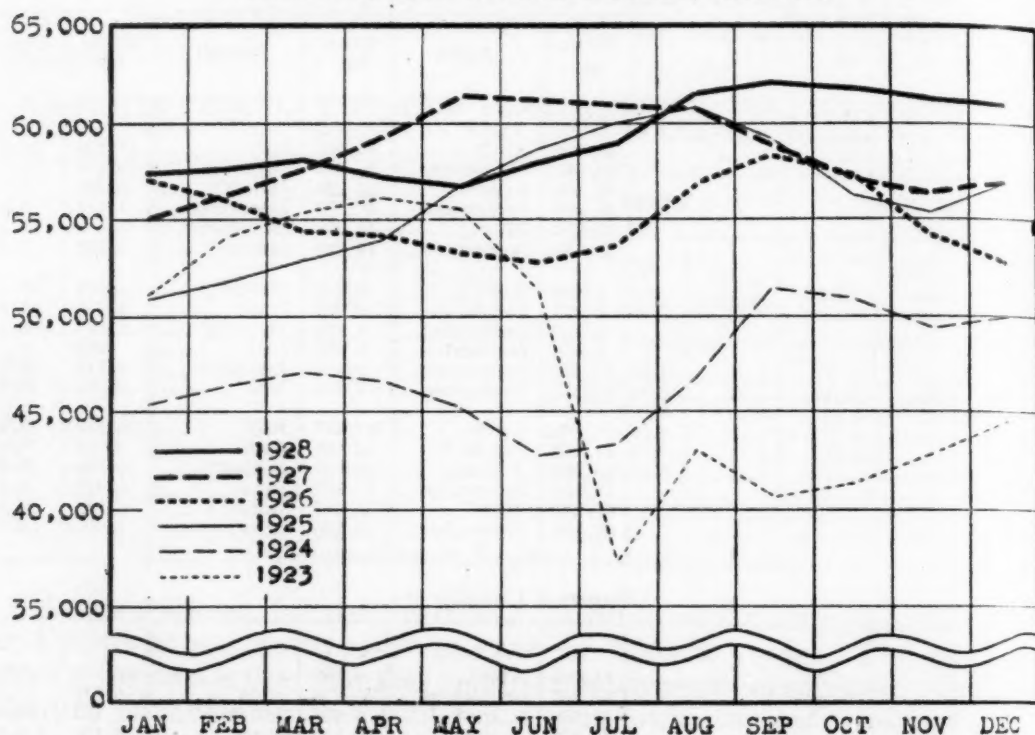


TABLE 7.—MAXIMUM AND MINIMUM EMPLOYMENT IN GARAGES AND AUTOMOBILE REPAIR SHOPS IN OHIO, 1923 TO 1928, BY SEX

Sex and year	Maximum		Minimum		Variation from maximum	
	Number	Month	Number	Month	Number	Per cent
<b>Males:</b>						
1923.....	11,479	September..	8,954	January.....	2,525	22.0
1924.....	13,720	May.....	12,285	December.....	1,435	10.5
1925.....	15,270	August.....	13,408	January.....	1,862	12.2
1926.....	18,275	June.....	15,742	January.....	2,533	13.9
1927.....	17,786	April.....	15,667	January.....	2,119	11.9
1928.....	18,274	August.....	16,361	January.....	1,913	10.5
<b>Females:</b>						
1923.....	1,282	December.....	1,013	January.....	269	21.0
1924.....	1,427	June.....	1,351	December.....	76	5.3
1925.....	1,659	September.....	1,502	January.....	157	9.5
1926.....	1,865	August.....	1,676	January.....	189	10.1
1927.....	1,735	May.....	1,637	December.....	98	5.6
1928.....	1,902	September.....	1,747	January.....	155	8.1
<b>Both sexes:</b>						
1923.....	12,739	September.....	9,967	January.....	2,772	21.8
1924.....	15,140	May.....	13,636	December.....	1,504	9.9
1925.....	16,927	August.....	14,910	January.....	2,017	11.9
1926.....	20,094	June.....	17,418	January.....	2,676	13.3
1927.....	19,463	April.....	17,337	January.....	2,126	10.9
1928.....	20,171	August.....	18,108	January.....	2,063	10.2

Chart 3 shows graphically the course of employment of both sexes combined in garages and automobile repair shops in Ohio in each of the six years.

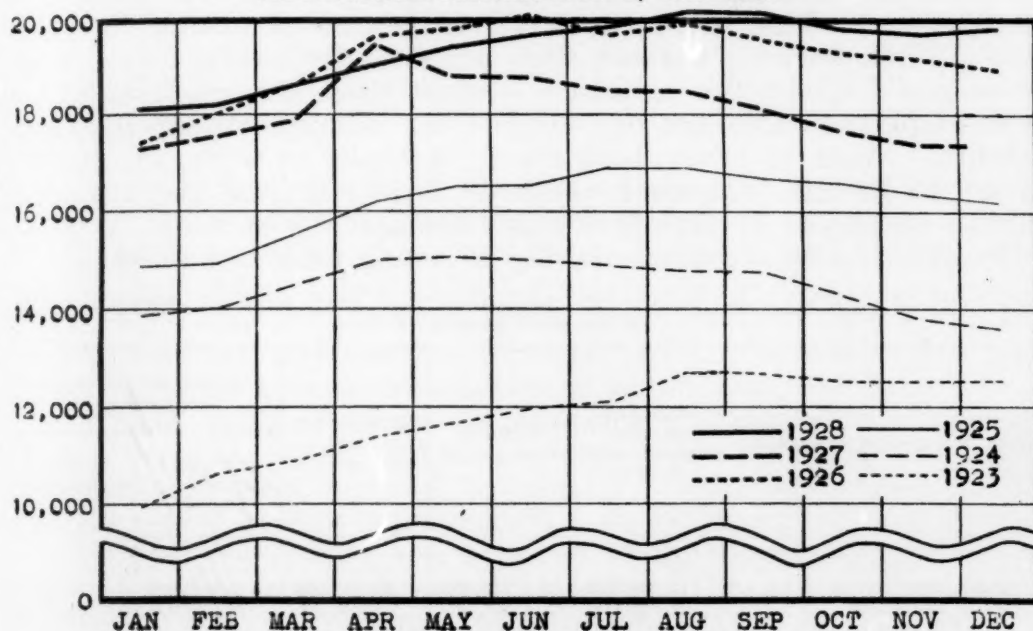


### Conclusion

IN conclusion, this study has shown that in the manufacture of automobiles and auto parts, 11,055 fewer persons were employed in October than in May, 1923; 23,909 fewer were employed in November than in March, 1924; 12,242 fewer were employed in January than in May, 1925; 13,859 fewer were employed in December than in June, 1926; 19,671 fewer were employed in November than in April, 1927; and 20,738 fewer were employed in January than in June, 1928.

In the manufacture of rubber tires and tubes, 18,743 fewer persons were employed in July than in April, 1923; 8,547 fewer were

CHART 3.—FLUCTUATION OF EMPLOYMENT OF BOTH SEXES IN GARAGES AND AUTOMOBILE REPAIR SHOPS, 1923-1928



employed in June than in September, 1924; 9,863 fewer were employed in January than in August, 1925; 5,422 fewer were employed in June than in September, 1926; 6,338 fewer were employed in January than in May, 1927; and 5,405 fewer were employed in May than in September, 1928.

In garages and automobile repair shops, 2,772 fewer persons were employed in January than in September, 1923; 1,504 fewer were employed in December than in May, 1924; 2,017 fewer were employed in January than in August, 1925; 2,676 fewer were employed in January than in June, 1926; 2,126 fewer were employed in January than in April, 1927; and 2,063 fewer were employed in January than in August, 1928.

### Number of Insured Persons in Employment in Great Britain, 1928 to 1930

FOR some time past the British Government has made public figures showing the number of insured persons employed, feeling that this is a logical corollary to the figures on employment which are published regularly. The issue of the Ministry of Labor Gazette for May, 1930, contains a summary of these figures from July, 1928, to the end of April, 1930.

The total number of persons insured under the unemployment insurance acts is computed every year from the number of unemployment books that are exchanged at the beginning of July. A provisional estimate of the number insured can be made thereafter each month from the information available as to new entrants into insurance and from the experience of former years as to the number who pass out. The number unemployed is recorded monthly at the unemployment exchanges, and the difference between this and the number insured gives the number not recorded as unemployed. As the figures from the exchanges, however, do not include those who are unemployed on account of illness, accident, or other forms of unrecorded unemployment, a uniform deduction of 3.5 per cent is made from the number of insured persons not recorded as unemployed, and the result is taken to represent the number in employment. This figure, however, makes no allowance for those who are not working because they are directly involved in a strike or lockout. Under the insurance scheme, these are not looked upon as unemployed, and are not eligible for unemployment insurance benefits. Since, however, they are not actually at work, the number known to be idle from such causes is deducted from the estimated number employed to show how many are actually at work.

Based on such computations, the following table is published:

NUMBER OF INSURED PERSONS IN EMPLOYMENT AND NOT IN EMPLOYMENT  
IN GREAT BRITAIN

Year and quarter or month	Estimated number insured, aged 16 to 64	Number unemployed	Number not recorded as unemployed	Estimated number in employment	
				Including those in trade disputes	Excluding those in trade disputes
1928					
July to September.....	11, 649, 000	1, 317, 000	10, 377, 000	9, 968, 000	9, 966, 000
October to December.....	11, 750, 000	1, 351, 000	10, 399, 000	9, 987, 000	9, 985, 000
1929					
January to March.....	11, 786, 000	1, 333, 000	10, 453, 000	10, 040, 000	10, 032, 000
April to June.....	11, 822, 000	1, 138, 000	10, 684, 000	10, 270, 000	10, 265, 000
July to September.....	11, 852, 000	1, 156, 000	10, 696, 000	10, 281, 000	10, 280, 000
October to December.....	11, 875, 000	1, 269, 000	10, 606, 000	10, 191, 000	10, 187, 000
1930					
January.....	11, 892, 000	1, 476, 000	10, 416, 000	10, 000, 000	9, 999, 000
February.....	11, 900, 000	1, 538, 000	10, 362, 000	9, 945, 000	9, 941, 000
March.....	11, 950, 000	1, 641, 000	10, 309, 000	9, 890, 000	9, 888, 000
January to March.....	11, 914, 000	1, 552, 000	10, 362, 000	9, 945, 000	9, 943, 000
April.....	11, 975, 000	1, 704, 000	10, 271, 000	9, 852, 000	9, 799, 000

Index numbers (average, 1924=100)

<i>1928</i>					
July-September.....	105. 6	115. 6	104. 2	104. 4	104. 8
October-December.....	106. 1	118. 8	104. 6	104. 6	105. 0
<i>1929</i>					
January-March.....	106. 5	117. 2	105. 2	105. 2	105. 4
April-June.....	106. 8	100. 1	107. 5	107. 6	107. 9
July-September.....	107. 0	101. 7	107. 6	107. 7	108. 0
October-December.....	107. 3	111. 6	106. 7	106. 7	107. 1
<i>1930</i>					
January.....	107. 4	129. 8	104. 8	104. 7	105. 1
February.....	107. 5	135. 3	104. 3	104. 2	104. 6
March.....	107. 9	144. 3	103. 7	103. 6	103. 9
January-March.....	107. 6	136. 5	104. 3	104. 2	104. 5
April.....	108. 2	149. 9	103. 4	103. 2	104. 0

It is explained that the figures from July 1, 1929, are provisional, and may be subject to revision when the estimated numbers insured at July, 1930, are available.

### Campaign Against Unemployment in Italy

THE May, 1930, number of the International Labor Review contains an article by Dr. Attilio Oblath, describing the effects of economic conditions on the labor market since the war, the various phases of the struggle against unemployment, the steps taken to insure a more satisfactory distribution of population by the organization of internal migration, and the efforts made to improve the country's national resources by a policy of general development.

The average number of wholly unemployed workers during the years since the war was in April, 1919, 395,394; in July, 1920, 88,101; in 1922, 407,364; in 1923, 246,346; in 1924, 164,854; in 1925, 110,465; in 1926, 113,902; in 1927, 278,484; in 1928, 324,422; and in 1929, 300,788.

The cessation of activity in the war industries following the signing of the armistice and the demobilization period led to an acute period of depression in the labor market which, however, was of short duration, as the reconstruction of the devastated areas, the reorganization of the railroads, the provision of a merchant fleet, the renewal of building activity, and the transformation of war industries into peace industries led to a rapid resumption of production.

Increased supply of media of exchange and depreciation of currency led to a rise in prices and encouraged trade. Demand increased, but the supply soon overtook and finally outran the demand in 1921. Another period of depression ensued. In 1922, activity was resumed and for five years there was a period of inflation during which the labor market was comparatively steady. The average number of agricultural workers unemployed fell from 100,479 in 1922 to 20,645 in 1925; of employees in the metal industries from 6,147 in 1923, to 2,244 in 1925; and in the textile industry from 24,638 in 1923 to 9,577 in 1925.

In the last half of 1926 the depreciation of the currency reached its limit, and a policy of revalorization was adopted. Restriction of credit and of the amount of currency in circulation led to a fall in prices and a rise in the exchange value of the lira. The average number of unemployed increased from 89,434 in September, 1926, to 414,283 in December, 1927. Exports decreased and the volume of imports increased. Industrial and commercial activity was checked and a bad harvest increased the depression. The final stabilization of the lira, December 21, 1927, reduced the depression and hastened the return to normal conditions. The unemployed were absorbed in every branch of industry, and their number fell from 439,211 in January, 1928, to 282,379 in October, 1928. Bad weather conditions in the winter of 1928-29, however, led to extensive unemployment—the number reaching 461,889 in January, 1929. Beginning in March, 1929, the number of unemployed decreased to 297,382 in October, 1929, when another depression occurred, caused by the general fall of prices on the international market.



Several measures have been adopted for combating unemployment in Italy, including compulsory insurance, organization of employment exchanges, a program of public works, an extensive policy of land improvement, and the regulation of internal migration.

### Compulsory Unemployment Insurance

ITALY first adopted a system of unemployment insurance in 1919, but the system at present in force is regulated by decree No. 3158, of December 30, 1923. Insurance is compulsory for employed persons of both sexes between the ages of 15 and 65 years, with the exception of officials in the public service, domestic servants, private employees whose monthly remuneration exceeds 800 lire (\$42.08), artists, theatrical and motion-picture employees, persons who work at home, persons whose remuneration consists in a share in the profits, and persons who are employed on account of another who is bound to supply them with board, agricultural workers generally, persons who are only occasionally employed on account of another, and persons employed exclusively on work which is performed annually during fixed periods lasting less than six months. The cost is borne exclusively by the employers and employees. Insured persons are divided into three wage groups with three different rates of benefit as shown in Table 1.

TABLE 1.—RATE OF BENEFIT FOR INSURED PERSONS, BY WAGE GROUP  
[Conversions on basis of lira at par = 5.26 cents]

Group	Daily earnings		Fortnightly contribution		Daily benefit	
	Lire	U. S. currency	Lire	U. S. currency	Lire	U. S. currency
I.....	Up to 4	\$0. 21	0. 70	\$0. 037	1. 25	\$0. 066
II.....	4-8	. 21-. 42	1. 40	. 074	2. 50	. 132
III.....	Over 8	. 42	2. 10	. 110	3. 75	. 197

Benefit is paid for not more than 90 days if not less than 24 fortnightly contributions have been paid during the preceding period of 2 years, and for not more than 120 days if not less than 36 fortnightly contributions have been paid. The system is administered by the National Social Insurance Fund. Its operations from 1924 to 1928 are shown in Table 2.

TABLE 2.—AVERAGE NUMBER OF UNEMPLOYED IN RECEIPT OF BENEFIT, AND BENEFITS PAID, 1924-1928  
[Conversions on basis of average exchange rate for year]

Year	Unemployed workers in receipt of benefit		Number of days' benefit paid							Average benefit per day	
	Average number per month	Per cent of all unemployed registered	Class I		Class II		Class III		Total	Lire	U. S. currency
			Number	Per cent	Number	Per cent	Number	Per cent	Number		
1924-----	31,888	19.5	81,534	1.2	786,442	11.8	5,877,805	87.0	6,745,781	3.57	\$0.156
1925-----	19,226	17.4	105,500	2.6	790,147	19.3	3,194,570	78.1	4,090,217	3.44	.137
1926-----	31,577	27.7	124,406	2.0	1,289,550	20.4	4,908,918	77.6	6,322,874	3.44	.134
1927-----	91,776	32.8	434,209	2.3	2,843,065	15.3	15,376,554	82.4	18,653,828	3.51	.180
1928-----	96,288	29.7	735,864	3.9	3,481,215	18.6	14,534,548	77.5	18,751,627	3.42	.181

### Employment Exchanges

BY DECREE No. 2214, October 19, 1919, employment agencies were authorized to be set up on a territorial basis for all classes of workers, either by Provinces and municipalities, or by agreement between organizations of employers and workers or by philanthropic organizations. Employers were free to apply to the exchanges or to engage their workers directly or through their own agents. The placing of salaried employees was kept distinct from that of workers, and private employment agencies carried on for profit were prohibited. Only 126 recognized exchanges existed on December 31, 1923, when the decree was repealed. The National Institute for Medical and Legal Assistance for Agricultural and Industrial Accidents and for Social Insurance, established in 1925, began a system of employment exchanges under the direction of the General Confederation of Fascist Trade Union Corporations. The work of placement was carried out by local bodies, the employer choosing his workers from among those registered with the exchange and vacancies being filled in the order in which applications were received.

A change occurred when the system of corporative organizations was adopted. The decree of July 1, 1926, intrusted to the corporations of employers and employees the task of setting up employment exchanges where needed. The Charter of Labor April 21, 1927, supplemented this provision by providing that the exchanges should be under the supervision of the corporative organs of the State and that employers should engage any one on the register, giving preference, however, to Fascists.

The decrees of March 29 and December 6, 1928, introduced a series of measures concerning the working and organization of the employment exchanges. These authorize the Ministry of Corporations, after consulting the organizations concerned, to set up exchanges for any classification of workers needed. Provincial exchanges which supervise the local exchanges are in turn supervised by the labor and social welfare section of the Provincial Economic Council. The Ministry of Corporations controls and supervises the provincial, interprovincial and national exchanges.

Thus the placing of workers in employment is carried out by the trade associations under the guidance and control of the State. Each exchange is managed by an administration committee consisting of an equal number of workers and employers and the secretary of the party as chairman. The local exchanges are located on the premises of the trade-unions and from the trade-union officials are chosen the officials of the exchanges. No fees are charged to either workers or employers for services rendered. It is compulsory for the unemployed to register on special lists prepared by the exchanges, for the employers to apply to the exchanges when they wish to engage workers, and to choose these workers from among the names on the lists. Employers are fined who hire unregistered workers or who do not report the dates when workers are engaged or leave their service.

Legislative decree No. 2762, November 15, 1928, transformed into the act of June 24, 1929, states that the exchanges are to be supported by a special fund half of which is contributed by the Unemployment Insurance Fund, one-tenth by the Ministry of Corporations,

one-fifth by the National Confederations of Fascist Trade Unions, and one-fifth by the Fascist General Confederations of Employers.

Employment exchanges have been set up for various classes of workers. For agricultural workers exchanges have been organized in 1,172 municipalities; in addition there are 111 zonal exchanges, for coordinating the labor market in the frontier zones, and 81 provincial exchanges.

The exchanges deal with population problems and production policy, besides being administrative and clerical. The exchanges for agricultural workers prepare special lists showing the number of days' work done by each worker and where employed. They know the needs of each district and distribute the workers among the different localities, and the work to be done among the workers so that each shall have the same number of days' work, and see that the contracts of employment are properly carried out.

Under the decree of December 12, 1929, exchanges for industrial workers have been set up throughout the Provinces, with 236 branch exchanges in the chief industrial centers. Provincial exchanges for commercial workers have also been established. Thirteen are to be opened in important tourist centers and in districts in small rural Provinces where commercial activity is less highly developed, and several branch exchanges where commercial workers are to be placed in health resorts or in places having seasonal commercial activities.

### Internal Migration

SUPPLEMENTARY to the local plans already described, a system of interprovincial organization exists to distribute labor over the whole country, taking it from regions where temporarily the supply exceeds the requirements and placing it where temporarily it is inadequate. Thus during seedtime and harvest many workers are taken to certain districts where there is a shortage of labor and are returned home after the seasonal work is finished. The movement has been more marked in recent years as a result of the policy of rural development where land reclamation and improvement is being carried on. This is done under the direction of an Internal Migration Committee organized under decree No. 440, March 4, 1926, which encourages land settlement in uncultivated districts by regulating internal migration and encouraging movements of the labor supply.

In June and July, 1929, 76,080 persons were moved by this committee temporarily to crop-growing regions.

The Minister of Public Works is permitted to declare certain public works to be urgent and permit a permanent transfer of labor, in which case the State will pay part of the traveling and housing expenses of the workers transferred. After five families have been put at work on land settlement undertakings the State pays 25 per cent of the expenses of the undertakings and from 20 to 33 per cent of the expenses of small holders who have effected improvements on their farms or have brought families of settlers from other regions, and also will pay interest at 4 per cent for not more than 30 years on loans contracted by agricultural improvement enterprises which have definitely asked for workers. The State also encourages the institution of schools and measures for combating malaria and other infectious diseases.



By an order of December 24, 1928, prefects of Provinces were given the right to take energetic steps to prevent overcrowding in the towns, and town authorities have the right to send back to his place of origin any worker who can not prove that he has obtained employment within a fortnight of his arrival. This applies to permanent emigration.

### Public Works

AN INTERDEPARTMENTAL committee to deal with the unemployment resulting from demobilization was set up in 1918 to carry out public works to a total value of 3,300 million lire. Because of unfavorable economic and financial conditions, a similar committee was set up the following year to grant loans and subsidies free of interest to the Provinces, municipalities, and private companies. It granted 3,500 loans to the value of 470 million lire. The need for coordination in this work resulted in a third interdepartmental committee being set up in 1921 without satisfactory effects on the labor market, until the unification of public works in 1924. From 1926 to 1929, the extent of State action is shown in Table 3:

TABLE 3.—PUBLIC WORKS ORGANIZED BY THE STATE, 1926 TO 1929

Period	Number of works carried out	Approximate value of works		Number of—	
		Lire	U. S. currency	Workers employed	Days' work furnished
1926:					
First half year.....	4,845	4,151,311,000	\$161,461,090	58,189	1,136,612
Second half year.....	5,546	4,222,938,000	164,246,950	101,142	2,317,035
1927:					
First half year.....	5,497	4,444,568,000	229,161,926	115,203	2,721,453
Second half year.....	5,289	4,309,896,000	222,218,238	84,867	1,614,630
1928:					
First half year.....	5,083	4,521,167,000	237,682,270	114,523	2,689,989
Second half year.....	5,481	4,623,398,000	243,056,656	98,792	1,916,467
1929:					
First half year.....	6,002	4,723,286,000	247,188,449	144,402	3,570,869
Second half year.....	5,479	4,250,281,000	222,434,206	132,516	2,853,576

### General Development Scheme

THE MAJORITY of the population of Italy depends on agriculture for existence, as 92 per cent of the Kingdom is under cultivation. The Government is trying to reclaim uncultivated land and make it more productive. In 1923 and 1924, legislation was enacted for draining marshes and improving land in districts where malaria was prevalent. In 1928, the general development scheme was adopted involving the reclamation and development of one-thirteenth of the country which had not been cultivable nor habitable. July 1, 1929, the scheme was put into effect, covering drainage, irrigation, construction of water conduits, and construction and improvement of roads. The Provinces are to bear a part of the cost of drainage, irrigation, and rural building. The number of workers employed on drainage, irrigation, and soil improvement, May, 1929, was 78,890.

These are the most important and most characteristic features of the policy adopted to control unemployment in Italy.

## New Zealand Program for Treatment of Unemployment

**I**N October, 1928, the New Zealand Government appointed a committee to consider and report upon the whole question of unemployment, but before the appointees could make a fair start at their work a general election brought the United Party into power. This party had pledged a more vigorous campaign against unemployment, and one of its early acts was to renew the appointment of the committee. In August, 1929, the committee made a preliminary report, and in January, 1930, followed this with a second report, giving its considered recommendations for the treatment of the whole question of unemployment.

The situation in New Zealand, the report<sup>1</sup> points out, is affected by the large part the primary industries play in its economic life. The secondary industries are to a large extent auxiliary to the agricultural and pastoral pursuits on which the prosperity of the Dominion rests, and in which the larger part of its population is engaged. But these primary industries are essentially seasonal, and their fluctuations affect the subsidiary industries dependent upon them. In addition, New Zealand is affected by the general causes working to produce unemployment elsewhere. Analyzing the whole situation, the committee concludes that unemployment in New Zealand may be classified as follows:

1. Seasonal unemployment in the primary industries—butter and cheese making, shearing, meat freezing, harvesting.
2. Unemployment in other industries because of the seasonal nature of the primary industries—as, for instance, in connection with the transport and shipment of butter and cheese, wool, and meat.
3. Unemployment arising out of the permanent replacement of manual labor by the use of improved methods and machinery—as, for instance, the use of tractors and other improved appliances for the loading and unloading of ships and cargo handling on wharves, the use of steam shovels and other plant in road making, and the use of more effective machines generally in connection with manufacture.
4. Unemployment arising from the substitution of new materials—as, for instance, the use of oil in place of coal as ships' fuel, the use of electric power in place of steam, and the use of brick, concrete, and steel in place of timber in buildings.
5. Periodic general unemployment arising from general depression of trade, as occurred particularly in 1921-22, and again in 1926-27.
6. Unemployment arising from incapacity or from improper training.

### Plan for Treatment of Problem

THE committee holds that any satisfactory treatment of the situation requires that industry should be so organized that it will furnish profitable employment to all workers. If this is not done, and if, as a result, workers for whom no work is available continue to register at the employment exchanges, then support should be provided for them during their periods of unemployment. A constructive treatment of the problem demands three lines of activity:

1. The provision of employment between seasons for those workers who are regularly employed in seasonal work connected with the primary industries.
2. The provision of employment for those workers who are displaced by changes of industrial methods, increased use of labor-saving machinery and changes in the demand for commodities.

<sup>1</sup> New Zealand. Committee on Unemployment. Unemployment in New Zealand. Wellington, 1929.

3. The provision of sustenance payments for unemployed workers willing to work and capable of working during periods when employment can not be found for them.

To carry out this program, the committee feels that two things are essential: First, a permanent body to deal with the whole subject of unemployment, and, second, a fund for the use of such a body. For the first, it is proposed that a permanent board shall be created, consisting of six members appointed by the Governor-General. Two are to be appointed from nominations made by employers' organizations and two from nominations made by workers' organizations, and two are to be selected by the Government, one of whom is to represent the taxpayers not found in either the employers' or the workers' organizations, and the other is to be chairman of the board. This body is to function continuously, and to act in an advisory and consultative capacity to the Government on all questions affecting the welfare and development of industry. It is to be empowered to plan and coordinate necessary public works; to compile schedules of works suitable as relief schemes; to assist farmers in bringing deteriorated land into production with the aid of unemployed labor; to make loans, when this is desirable, for the purpose of establishing the unemployed in productive occupations or businesses under the supervision of local committees; to establish bureaus for the registration of the unemployed and for organizing employment; to undertake relief works if and when these are found necessary; and to make sustenance payments to the unemployed for whom work is not available.

These activities are to be financed by a special fund, the employment and sustenance fund, which is to be raised, in the main, by direct taxation. Unemployment, the committee insists, is a social problem, and its cost should be borne by the community as a whole, instead of by merely that part of the community immediately engaged in industry. Raising the fund by indirect taxation is not desirable, since in that case the burden is not realized and the individual taxpayer feels no personal interest in the question. It is proposed, therefore, that the fund shall be raised by a flat-rate employment tax on all workers, ranging from 12s. to 24s. annually, a penny per pound tax on individual incomes and undistributed company profits, an equivalent addition to the land tax, and a 1 per cent levy on the local general taxes. From these sources, it is calculated, about £700,000 a year would be raised. This may be insufficient to meet current expenses and to build up a reserve for times of stress, so it is proposed that one-third of the board's expenses each year shall be met by the General Government, and two-thirds by the fund. As a result of this, while the amount raised for the fund will be fairly constant year by year, the amount given by the Government will vary directly with the amount of unemployment prevailing each year.

The committee thus sums up the nature of its recommendations:

In the foregoing recommendations there are three outstanding features: First, the treatment of unemployment as a social problem, and the consequent provisions designed to spread the responsibility for and also the cost of measures taken toward a solution of this problem as widely as possible over the whole community; second, the establishment of a permanent nongovernmental board of citizens as an organization with authority to deal with all matters pertaining to the relief of the unemployed and the provision of special works for their absorption (this organization to act also as an advisory body to the Government on industrial



and economic questions which require from time to time to be dealt with by legislation and which inevitably affect the development of industries); and, third, the establishment of a fund for the purposes of the employment board to which, with very few exceptions, every citizen of the country will contribute.

Our very definite and unanimous conclusions are—first, the problem of unemployment for its solution requires an organization of a nature different from anything which has previously been provided—in other words, the board which we recommend; second, the organization can not work without funds; third, the responsibility for providing the funds must be as widely spread as can possibly be made effective.

### Growth of Unemployment in Russia

**F**IGURES published by the Russian Central Statistical Bureau<sup>1</sup> show a steady growth of unemployment among the members of the labor unions in the Soviet Union (U. S. S. R.) during 1926-27 to 1928-29. According to these figures the number in each of the years since 1925-26 was as follows: 1925-6, 1,182,500; 1926-7, 1,774,100; 1927-8, 2,192,400; 1928-9, 2,319,700. There are no available data showing the number of unemployed workers outside of the labor union membership.

<sup>1</sup> Russia (U. S. S. R.). Central Statistical Bureau. *Statisticheskoe Obozrenie*, Moscow, December, 1929, p. 16.

# CHILD LABOR

## Child Labor in Wisconsin

THE Industrial Commission of Wisconsin publishes in its Bulletin No. 23, April, 1930, a summary of child labor permits issued in 1929, the conditions revealed by the examinations required, the school attainments of the children concerned, their age, nativity, and distribution among industries, accidents to minors, and the like. The number of new or original permits issued is compared with those of former years, with the following results:

NUMBER OF NEW OR ORIGINAL CHILD LABOR PERMITS ISSUED IN WISCONSIN, 1925 TO 1929

Year	Permits issued			Year	Permits issued		Whole State
	Milwaukee	State, outside of Milwaukee	Whole State		Milwaukee	State outside of Milwaukee	
1925.....	6, 559	8, 514	15, 073	1928.....	5, 791	8, 535	14, 326
1926.....	6, 343	9, 164	15, 507	1929.....	6, 173	8, 978	15, 151
1927.....	6, 283	7, 773	14, 056				

In Milwaukee, it will be noticed, there has been a slight falling off in the number of new permits as compared with those issued in 1925, while in the rest of the State there has been an increase, though it is but small. In the number of permits reissued there has been a decrease both in Milwaukee and in the rest of the State, so that the total number issued in 1929 is 20,132, against 20,893 in 1925.

In Milwaukee a physical examination given to 3,523 of the children applying for permits showed that only 6.5 per cent were free from defect. Dental defects were by far the most common, 2,209 children, or 62.5 per cent of the total group having this as their principal defects; 14.1 per cent had throat defects; 6.5 per cent had trouble with their eyes; 3.7 per cent suffered from malnutrition; and 1.3 per cent from heart trouble. The large majority of these impairments, it is stated, could be successfully treated and disposed of without much trouble or expense. The medical examination proves particularly valuable in the cases of children having serious impairments, such as leaky hearts, advanced stages of goiter, nervous diseases, defects of sight or hearing, and the like.

## Compensation Cases of Wisconsin Minors Closed in 1929

STATISTICS of compensable injuries to minors in Wisconsin are presented in Wisconsin Labor Statistics, April, 1930 (Bulletin No. 23), which is devoted to the subject of child labor in the State during 1929.

Under the employment regulations of Wisconsin, labor permits may be issued by the industrial commission to children under 17 years of age, allowing them to work (except in certain employments, which are prohibited because of their hazardous character), and the employment of such minors without permits is illegal. Permits are not required for minors between 17 and 21 years of age, but their employment in certain occupations is illegal.

The State compensation act provides that a minor of permit age who is injured while employed without a labor permit in otherwise lawful employment is entitled to double indemnity. A minor of either permit age or over who is injured while employed in a prohibited occupation is entitled to triple indemnity.

The increased liability can not be insured, and is consequently paid by the employer instead of by the insurance carrier. This provision discourages the illegal employment of minors and also secures to the claimant practically the amount of the indemnity which would ordinarily be recovered at common law, but without contest or delay.

The number of cases in which the increased compensation was claimed, and the difference in cost to the respective employers, by calendar years, from 1921 to 1929, are shown in Table 1.

TABLE 1.—INCREASED COMPENSATION PAID FOR INJURIES TO MINORS ILLEGALLY EMPLOYED IN WISCONSIN, 1921 TO 1929

Year	Number of cases			Amount of compensation		
	Em- ployed with out permit	Em- ployed in pro- hibited work	Total	Normal	Penalty	Total
1921.....	86	11	97		\$24,499.37	
1922.....	65	10	75	\$6,135.00	12,387.46	\$18,522.46
1923.....	63	6	69	9,781.79	19,640.24	29,442.03
1924.....	73	14	87	15,214.44	30,604.58	55,819.02
1925.....	50	7	57	5,805.76	11,596.39	17,402.15
1926.....	49	17	66	12,839.17	22,434.24	35,273.41
1927.....	30	15	45	11,110.82	16,112.49	27,223.31
1928.....	33	20	53	7,593.86	9,653.91	17,247.77
1929.....	26	13	39	9,192.85	10,057.61	19,250.46

Of the 22,360 compensation cases closed in the State during 1929, there were 2,333 cases, or 10.4 per cent of the total, which involved injuries to minors. Table 2 shows the number of compensable cases closed in the year, by extent of injury, time cost, and money cost, classified according to age of the injured minor:



TABLE 2.—COMPENSATION CASES OF MINORS IN WISCONSIN CLOSED DURING 1929, TIME LOST, AND BENEFITS PAID, BY AGE OF INJURED

Age	Number of cases				Number of days lost	Total compensation paid	Medical aid in fee cases		Funeral expenses
	Fatal, and permanent total disability	Permanent partial disability	Temporary disability	Total			Number of cases	Amount paid	
12 years.....			1	1	107	\$122	1	\$201	
13 years.....		1	1	2	594	1,110	2	24	
14 years.....		2	10	12	851	1,493	12	431	
15 years.....		3	12	15	5,591	15,683	13	1,028	
16 years.....	2	11	112	125	25,584	22,802	112	5,352	\$400
17 years.....	2	27	197	226	23,214	20,654	211	9,297	200
18 years.....	3	52	494	549	51,406	40,919	509	19,468	600
19 years.....	1	71	641	713	65,596	77,803	658	32,020	200
20 years.....	3	67	620	690	71,789	79,677	620	27,568	600
All ages.....	11	234	2,088	2,333	244,732	260,263	2,138	95,389	2,060

Report of English Advisory Committees for Juvenile Employment

THE report of the Ministry of Labor on the work of these committees for the year 1928<sup>1</sup> shows a marked increase in the number of committees and amount of work done. Late in 1927 the whole responsibility for the work of these local committees engaged in advising, placing, and following up young persons either anxious to enter employment or already in it, which had up to that time been divided between the local education authorities and the Ministry of Labor, was transferred to the latter body. During 1928 two national advisory councils, one for England and Wales and one for Scotland, were formed and devoted considerable attention to the whole subject, especially to the adoption of a system of working permits for all boys and girls under 18. No definite conclusion on the matter had been reached, however, at the time of the issuance of the report under review. At the close of the year, 282 local advisory and labor committees were operating in England and Wales. In Scotland, the system does not seem to have taken root, and questions concerning juvenile employment are handled directly by the Ministry of Labor.

The local committees are made up of representatives of the local education authorities and teachers, employers representing the more important local industries, representatives of the working people, and others interested in problems of juvenile employment and welfare, so that each committee is in a position to know the views of industry and education alike on any question which may arise. In some cases subcommittees are formed to handle special aspects of employment—such as apprenticeship schemes, after care, and the needs of secondary-school pupils—or to deal with a particular group of trades.

<sup>1</sup> Great Britain. Ministry of Labor. Report on the work of advisory committees for juvenile employment for the year 1928. London, 1929.

## General Position at End of 1928

THE rate of unemployment among juvenile workers, 3.6 per cent, was low as compared with that among adult insured workers, which was 11.4 per cent. There was much variation, however, according to the industrial character of a given district. In London and the southern counties generally, the demand for young workers was good, and those leaving school could be placed within a few weeks. In Wales, however, on the Tyneside and through the north generally, demand was light and irregular.

Unemployment among juveniles is essentially a "black spot" problem. Moreover, while there may be on any one day approximately 70,000 juveniles unemployed between the ages of 14 and 18, the individuals constituting that number are constantly changing. Apart from those working short time for varying periods, the unemployed register is composed, except for the few weeks following the end of the school term, mainly of those who defer taking up employment in the hopes of obtaining some selected situation, or who are changing from job to job. Juvenile unemployment may therefore, apart from the distressed mining areas, to no small extent be regarded as a phase of transition between school and work or between different employments.

## Juvenile Unemployment Centers

WHERE such juvenile unemployment centers are established, attendance is usually compulsory for young persons drawing unemployment insurance benefits, but is voluntary for those under 16. At the close of 1928 there were 97 such centers in operation, of which 27 were in the distressed mining areas. Practical training is given at the centers, usually of a general rather than a vocational type, as it is desired to give instruction in the principles of coordination of hand and brain that underlie all manual work rather than to develop dexterity in any specific occupation. A few of the committees, however, arrange their courses so as to give at least a partial training for the staple trades of the district. In Sunderland, for instance, the aim is "to help those boys who have already commenced to serve apprenticeships to increase their knowledge of their own trades, while giving general training to the others." A more definite effort of this kind is made in the case of the girls, preparation for domestic service occupying a prominent place in the training provided for them. Partly as a result of this, the committees report that domestic service is less unpopular among girls than it was. Almost without exception the committees report a greater willingness on the part of the girls to consider positions as domestics, and while part of this is attributed to the difficulty of finding other work, part is "directly traceable to a slightly different outlook upon domestic work that appears to have arisen." There is still some difficulty, however, on the part of employers who do not wish to take girls as young as 14 and 15, and on the part of parents who do not wish their young daughters to take resident positions, preferring to have them under home control.

## Transfer of Juveniles from Distressed Areas

IN SOME of the areas where unemployment was most serious it became apparent by 1927 that for a considerable proportion of juveniles reaching the school-leaving age there was no chance of

securing employment within a reasonable distance of their homes. By way of preparation for transferring at least a part of the young applicants, the number of juvenile unemployment centers for boys in the distressed mining areas was considerably increased, the courses of instruction were changed, aid in reaching the centers was provided for those who lived at a distance, and wide publicity was given to the plan for transference. In February, 1928, the first transfers were made, specially selected boys being given transportation to places where positions had been found for them which offered satisfactory conditions and the prospect of reasonably permanent work. It was soon found that many of the vacancies, though satisfactory in other respects, did not pay wages sufficient to meet the expenses of a boy living away from home. To meet this situation, a part of the fund raised for the relief of the distressed mining areas was appropriated to help in such cases. Careful and comprehensive arrangements were made for safeguarding the process of transfer and for maintaining supervision and aftercare. Clubs, religious bodies, and other organizations have helped by providing opportunities for recreation, supplying companionship, and generally lending a hand in making the newcomers fit easily into their environment.

An objection urged against the scheme at first was that it would simply mean keeping local juveniles out of work for the benefit of those from a distance. In practice, however, it has been possible to send transferees to areas in which there is a shortage of juvenile labor, so that this difficulty has not arisen. A second important objection, the natural reluctance of parents to let their children go away from their own care, has been met largely by the system of local friendly cooperation and supervision, which prevents exploitation of the young workers and supplies normal and wholesome relationships. From February 17, 1928, when the plan was first initiated, to the end of the year, 1,840 boys had been placed in new locations and during the latter part of the time the rate of transfer was about 50 a week.

For obvious reasons less has been done in transferring girls, and as far as they are concerned the plan is usually limited to placing them in domestic service with carefully selected employers. Every safeguard has been taken to insure their safety and welfare, and the advisory committees have made a point of keeping in contact with each individual girl. In all, several hundred girls under 18 were transferred during the year.



# FAMILY ALLOWANCES

## Recent Developments in Family Allowance Systems <sup>1</sup>

**I**N THE early postwar years the payment of family allowances was widespread, particularly in Continental Europe, but as economic conditions became more stable the practice declined in importance in certain countries. In other countries the family-allowance movement has shown considerable progress and has aroused a great deal of discussion in various parts of the world. In Scandinavia family-allowance schemes have been almost entirely abandoned, but in many of the Central European countries, such systems are still important in certain kinds of employment, notably civil service and coal mining. The family-allowance régime in both France and Belgium continues to expand. In the civil service of the Commonwealth of Australia grants have been made for children since 1920, and New South Wales and New Zealand have passed legislation providing for the payment of such benefits for families with low incomes. The preceding information and the following data are taken from an article in the March, 1930, issue of the *International Labor Review*.

### France

THE establishments and services paying family allowances in money in France employ approximately 4,000,000 persons and pay 1,500,000,000 francs<sup>2</sup> (\$58,800,000) annually in family allowances. These totals include the figures for the equalization funds, employers not affiliated with such funds, and public service.

In 1919 there were 6 funds affiliated to the central committee on family allowances. These funds had 230 member establishments employing 50,000 workers, and the total amount paid in family allowances was 4,000,000 francs (\$548,000). In 1929 there were 229 funds affiliated with the committee, which had 25,000 member establishments with 1,740,000 workers, the annual disbursement in family allowances being 292,000,000 francs (\$11,446,400).

The average monthly rates of allowances paid by a number of the important funds in 1929 were, for 1 child, 28 francs (\$1.10); 2 children, 67 francs (\$2.63); 3 children, 116 francs (\$4.55); 4 children, 182 francs (\$7.13); 5 children, 255 francs (\$10); and 6 children, 328 francs (\$12.86).

Many of the funds also grant birth bonuses and nursing allowances, and the constantly expanding social services of the funds include visiting nurses, medical advice and inspection, dispensaries, vacation colonies, rest homes, etc.

The personnel of public administrative departments are paid family allowances, the annual grants to State officials and employees under the act of December 29, 1929, being as follows:

<sup>1</sup> For previous information on the subject see U. S. Bureau of Labor Statistics Bul. No. 401 and *Labor Review*, December, 1928 (pp. 20-27), and March, 1929 (pp. 146-155).

<sup>2</sup> Conversions of this and other amounts reported in this section of the article are made on basis of 1 franc at par = 3.92 cents in U. S. currency, except for 1919, when conversion is made on basis of 1 franc = 13.7 cents.

## FAMILY ALLOWANCES PAID TO EMPLOYEES OF PUBLIC ADMINISTRATIVE DEPARTMENTS

	Francs	U. S. currency
First child.....	660	\$25. 87
Second child.....	960	37. 63
Third child.....	1, 560	61. 15
Fourth and each subsequent child.....	1, 920	75. 26

The State also makes contributions under various acts for the aid of large families and for child welfare. The total credits allocated by the State under such provisions in 1929 are given below:

## CREDITS APPROPRIATED IN 1929 BUDGETS FOR ASSISTANCE OF LARGE FAMILIES AND CHILD PRESERVATION

Item	Francs	United States currency
State share in child endowment bonuses granted by department and communes.....	17, 000, 000	\$666, 400
National encouragement of large families (act of July 22, 1923).....	132, 000, 000	5, 174, 400
Assistance of women in childbirth.....	10, 500, 000	411, 600
Assistance of nursing mothers.....	32, 000, 000	1, 254, 400
Grant to societies for assisting mothers and protecting early childhood.....	7, 500, 000	294, 000
Assistance to large families and indigent widows.....	8, 000, 000	313, 600
State share in expenditure on the assistance of children.....	50, 000, 000	1, 960, 000

The ninth family allowance congress, 1929, expressed the wish that the funds should endeavor to assist their beneficiaries to apply the cheap housing acts. This congress also reached the conclusion that the funds' social work would not be superseded by the provisions of the new insurance legislation, although care would be required to avoid duplication of effort.

Chief among the large undertakings in which family allowances are paid, outside of equalization funds, are coal mining and railway operation. Allowances, made under collective agreements in most mining regions amount to 1 franc (3.9 cents) per day for the first child, 1.50 francs (5.9 cents) for the second child, and 2 francs (7.8 cents) for the third child. In the Saar and Moselle district, however, married workers receive 1 franc, plus for the first child 1.25 francs (4.9 cents), for the second child 1.50 francs, and for each subsequent child 2 francs. For the mining districts in France on the whole the allowances in cash formed 3.1 per cent of the aggregate earnings of all the workers in 1927.

By the act of December 19, 1922, and related decrees, contractors for public works and buildings for the State are obliged to pay family allowances to their workers and must affiliate with an approved equalization fund. Department or municipalities may also compel their contractors to make such grants. A bill drafted by the Government proposed to include in the family-allowance system all employers furnishing supplies to the State or the Departments and municipalities, on the ground that the system had not resulted in higher prices for building and public works and had given general satisfaction. This measure, however, was tabled.

With the expansion of the voluntary payment of family allowances the movement for compulsory system has also made headway. During recent years several bills for the purpose have been introduced into Parliament and have had considerable backing. The matter has at last been taken up by the Government, the Minister of Labor preparing a bill which was referred to the superior family allowance commission established by a decree of January 26, 1929. The commission unanimously approved the bill, with the exception of the provision including agriculture within the scope of the proposed law. The representative of the Ministry of Agriculture was not desirous of having the act apply immediately to agriculture, but the agricultural equalization funds wished inclusion under the law at once. The measure has been modified so that the law would not be immediately applicable to agriculture but could be made so by administrative order, setting the dates and defining the conditions of the application. The bill, which is drafted in accordance with the generally prevailing idea that the employer should pay family allowances, is at present before Parliament.

A report presented at the 1929 family allowance congress, giving data for 123 funds for 1926, 1927, and 1928, showed that the percentage heads of families formed of the whole number of workers rose from 25.22 in 1926 to 25.52 in 1928 and that the number of children for about the same number of families increased from 410,677 in 1926 to 525,509 in 1928. There was also a greater proportion of larger families among the families covered by the funds in 1928 than in 1926. Furthermore, based on figures from 46 funds, it is estimated that in 1928 the birth rate in the working population of the funds was more than 50 per cent higher than in the general population of similar age. Statistics for 27 funds showed an infant mortality rate below one year of 7.14 per 100 in 1928, while the rate for the general population was 9.10.

#### Belgium

THE first family-allowance fund in Belgium was established in 1921 in the Verviers district in the light engineering industry. In 1922 a fund of building employers and public-works contractors was constituted. In 1925 the equalization funds numbered 13, with a membership of 773 firms, employing 152,600 workers. According to the Association of Family Allowance Funds (formerly the Committee for the Study of Family Allowances) there were 40 approved<sup>3</sup> funds on June 1, 1929, and the estimated number of workers employed by the member firms of funds for which figures were available for the end of June, 1929, was 555,740,<sup>4</sup> as compared with 511,219 at the close of 1928 and 268,147 in November, 1927. In addition there were the staffs of public administrative departments providing family allowances, which included 123,000 persons in 1929, and such grants were also being made by railways with 110,000 workers and the Provinces and communes with forces aggregating 20,000 making a total of 808,740.

The accompanying table shows the monthly allowance rates of five important funds:

<sup>3</sup> The act of Apr. 14, 1928, requires that family-allowance funds be approved.

<sup>4</sup> For funds for which the number of workers on June 30, 1929, were not available, figures for the close of 1928 were taken.



TABLE 1.—FAMILY ALLOWANCES PAID BY 5 BELGIAN FUNDS, JUNE, 1929

[Conversions into United States currency on basis of 1 belga (5 francs) at par=13.9 cents]

Fund	Monthly rates for—									
	First child		Second child		Third child		Fourth child		Fifth or subsequent child	
	Francs	U. S. currency	Francs	U. S. currency	Francs	U. S. currency	Francs	U. S. currency	Francs	U. S. currency
District of Liege.....	15	\$0.42	30	\$0.83	50	\$1.39	80	\$2.22	80	\$2.22
Antwerp association.....	15	.42	20	.56	40	1.11	80	2.22	80	2.22
Tournai.....	15	.42	20	.56	40	1.11	80	2.22	80	2.22
Brabant (workers).....	15	.42	25	.70	40	1.11	80	2.22	80	2.22
Verviers (textiles).....	40	1.11	60	1.67	80	2.22	90	2.50	100	2.78

Additional statistics concerning the same five funds are given in the following table:

TABLE 2.—NUMBER OF CHILDREN COVERED BY 5 BELGIAN FUNDS, FAMILIES RECEIVING ALLOWANCES, WORKERS EMPLOYED, AND AMOUNTS PAID DURING FIRST HALF OF 1929

[Conversions into U. S. currency made on basis of one belga (5 francs) at par=13.9 cents]

Fund	Number of children covered	Number of families receiving allowances	Number of workers employed by affiliated firms	Amounts paid during first-half of 1929	
				Francs	U. S. currency
District of Liège.....	35,156	21,475	79,280	4,931,801	\$137,104
Antwerp Association.....	12,932	7,796	21,887	1,852,445	51,498
Tournai.....	8,040	5,281	16,782	1,003,037	27,884
Brabant (workers).....	23,361	14,202	36,573	3,270,585	90,922
Verviers (textiles).....	5,936	3,685	16,137	1,577,817	43,863

Until recently, family allowances in the mining industry were paid by the companies individually and not by funds. The act of April 14, 1928, provided that producers who furnish supplies to the State shall pay family allowances by affiliation with an approved family allowance fund. As the mine operators fell within this classification, they created funds in the districts of Centre, Charleroi, Liège, Limburg, and Mons. The rates of these funds conform to the provisions of the act. The rules and regulations of the family allowance funds in these mining districts generally stipulate that each affiliated company shall pay the allowance directly to its personnel and make a monthly contribution to the family allowance fund. A provisional monthly settlement is effected between the individual company and the fund, and a final settlement is made at the close of the year.

Even before the war family allowances were granted to certain grades of Government employees, and in 1920 the system was made general for State officials. Allowances are accorded for children up to 21 years of age who are not earning at least 8 francs (22 cents) a day. When, under an order of July 22, 1929, a special salary increase was granted to State employees, an additional allowance was paid to married workers in some of the large towns, and the allow-

ances for the fourth child and following children of administrative officials were made more substantial. Under the orders of December 16, 1927, and July 22, 1929, administrative officials receive monthly family allowances as follows:

MONTHLY ALLOWANCES TO ADMINISTRATIVE OFFICIALS

	Francs	U. S. currency		Francs	U. S. currency
First child.....	30	\$0.83	Fourth child.....	150	\$4.17
Second child.....	50	1.39	Fifth and each subsequent child.....	200	5.56
Third child.....	110	2.83			

Judicial officials do not receive an allowance for the first child but under an act of July 30, 1928, are paid 140 francs (\$3.89) for the third child, 180 francs (\$5) for the fourth, and 200 francs (\$5.56) for the fifth and each subsequent child. A bonus of 300 francs (\$8.34) is also granted at the birth of each child. The continuation of the payment of these grants to pensioned State employees has been recommended by the Belgian league in favor of large families. Moreover, a recent proposal has been made in the Senate that the Government should consider the possibility of extending family allowances to woman State employees provided their husbands are not in State employment and are not receiving such benefit. Many Provinces and communes are paying family allowances to their employees.

The act of April 14, 1928,<sup>5</sup> imposed the payment of family allowances and membership in an equalization fund "on contractors carrying out work for the State, the Provinces, or the communes, or work subsidized by these, as well as by manufacturers or producers supplying the State, Provinces, or communes with goods, provided the order amounts to at least 50,000 francs" (\$1,390). In accordance with the same act, concessionaires of public services are obliged to affiliate with an equalization fund and such obligation may be extended under the law to public-utility institutions and public establishments.<sup>6</sup> All the workers employed by the affiliated establishments must be covered by the system. Employers to whom the act is applicable are obliged to affiliate with an approved equalization fund.

Under the provisions of the above act the following rates are paid: 15 francs (42 cents) for the first child, 20 francs (56 cents) for the second, 40 francs (\$1.11) for the third, and 80 francs (\$2.22) for each subsequent child, until the age of 14. Allowances are continued until the age of 18 in the case of children not engaged in trades or who are apprenticed under a contract approved by the Government and under its control.

Considerable support has been given recently to proposals with a view to making the payment of family allowances a legal obligation on all employers. Some of these schemes provide that such grants be made from contributions either by the State or by employers to all persons who are not well-to-do. A Government bill which proposed

<sup>5</sup> For a summary of the law see Labor Review, Washington, July, 1928, pp. 39-40.

<sup>6</sup> Under an order of Sept. 29, 1928, certain public establishments and public utility institutions were placed under the obligation. To obtain approval a fund must make application to the Ministry of Labor, which consults the commission for family allowances, created under the act of Apr. 14, 1928. This commission has 11 members, 3 of whom represent the employers and 3 the workers.

to make it compulsory for all employers to grant family allowances was tabled in December, 1929. According to the measure every employer in industry properly so called, commerce, and agriculture would be required to be a member of an equalization fund, while the task of "superequalization" would be performed by a national equalization fund to which each individual fund would be affiliated.

Very interesting reports have been made by several of the important Belgian funds as to the effects of the family-allowance system on the birth rate and on child welfare. In the report (for the period October, 1927, to September, 1928) of the fund for the federation of factories producing zinc, lead, etc., it is stated that since 1922, when this fund was first established, the percentage of heads of families had risen from 27.8 to 42.30, and the percentage of children to the total number of workers from 60.3 to 98.19; and that the birth rate per 100 workers rose from 8.27 in 1923-24 to 9.36 in the year 1927-28.

The Brabant Regional Fund reports that its mortality rate for children under 1 year of age declined from 5.8 per 100 in 1925 to 5.1 per 100 in 1926, and that for children under 14 (or 16) years of age from 1.0 per 100 in 1925 to 0.57 per 100 in 1926. The national child welfare organization reported for the same region a mortality rate in 1923 of 8.58 per 100 for children under 1 year of age. It is pointed out, however, that it is not easy to evaluate these figures without a knowledge of the age distribution and the general variations in the make-up of the working populations covered.

### Germany

IN GERMANY the family-allowance system is not so important as it was in 1921-1924, particularly in private industrial undertakings. However, it is still in operation in coal mining and is also maintained in various districts for clerical workers, including those employed in wholesale and retail trade, and in a number of industries, for example, the metal, chemical, textile, and clothing industries. The system continues to be important in the public services and in insurance companies and banks.

In the mining industry in all districts family allowances are provided for in collective agreements. One grant is for the wife or household and the other grants are for children. Such allowances are supplementary to the money wages of married, widowed, and divorced workers and also to single workers who have dependents. The present allowances per shift in four important districts range from 0.09 to 0.16 reichsmark (2.1 to 3.8 cents) for a wife or household and for each child, usually up to 14 years of age or as long as he or she is attending school. The workers also receive allowances in kind, mainly coal, which is distributed free or at a reduced price. As a rule, married workers receive more coal than single workers.

Under the act of December 19, 1927, on salaries in State service, a monthly allowance of 20 marks (\$4.76) is granted for each legitimate, adopted, or illegitimate child up to the age of 16 years in charge of its father. If a child is still attending school or is receiving vocational training or has an income of its own of less than 30 marks (\$7.14) per month, the allowance is granted between the ages of 16 and 21. When a child is physically or mentally infirm and not able to make a



living and whose own income is less than 30 marks (\$7.14) per month, there is no age limit for the payment of the allowance. Married women employed by the State are paid family allowances, provided the husbands are unable to provide adequately for their children.

As a result of the uniform rate system for all classes of officials, family allowances constitute a larger percentage of the total earnings of lower-grade officials than of higher-grade officials, as will be noted from the table given below:

TABLE 3.—MEDIUM MONTHLY SALARIES IN FORCE FROM OCTOBER, 1927, FOR SPECIFIED CLASSES OF MARRIED AND SINGLE STATE OFFICIALS

Class of official	Salary				Per cent salary of married is of salary of single
	Single		Married, with wife and 2 children		
	Reichs- marks	U. S. currency	Reichs- marks	U. S. currency	
Class 12.....	179	\$42. 60	235	\$55. 93	131.3
Class 7.....	297	70. 69	353	84. 01	118.9
Class 3.....	584	138. 99	654	155. 65	112.0
Class 1.....	997	237. 29	1,067	253. 95	107.0

### Poland

IN POLAND family allowances are paid not only in coal mining but in certain manufacturing industries. These benefits are also being granted in State and other public services.

Family allowances paid in the coal-mining industry constitute an average supplement to the earnings of the workers as a whole of approximately 6 per cent, ranging from about 4½ per cent in Upper Silesia to approximately 10 per cent in the Dombrowa district. These grants are provided for in collective agreements and are paid by the employer.

In Polish Upper Silesia the allowance for a wife or household is 0.18 zloty (2 cents) and for children 0.28 zloty (3.1 cents) per shift worked and also for each shift lost as a result of statutory annual leave. In sickness or for general holidays allowances are discontinued. Legitimate, illegitimate, or adopted children under 14 years are eligible for these grants.

In two districts, Dombrowa and Cracow, family allowances are paid as a percentage supplement to wages for regular work performed on working-days. These percentage supplements and the percentage distribution of workers according to marital status and family responsibilities are given in the accompanying table:

TABLE 4.—PERCENTAGE ADDITION TO WAGES ON ACCOUNT OF FAMILY ALLOWANCES, BY CLASS OF WORKERS

Class of workers	Dombrowa district		Cracow	
	Percentage distribution of workers	Percentage addition to wages	Percentage distribution of workers	Percentage addition to wages
Unmarried.....	27		37	5
Married without children and married or widowed with 1 child.....	33	12	27	10
Married or widowed with 2 or 3 children.....	32	19	25	17
Married or widowed with 4 or more children.....	8	29	11	25

Ordinarily heads of families also receive larger amounts of free coal than do single workers.

The following figures from the statistical annual of the Polish Republic, 1929, show the proportion family allowances constitute of the salaries of specified officials in the capital of the country:<sup>7</sup>

TABLE 5.—MONTHLY SALARIES OF OFFICIALS IN ADMINISTRATIVE SERVICE IN WAR-SAW, DECEMBER, 1928

[One zloty at par=11.2 cents]

Occupation	Salaries				Percentage salary of married was to salary of single
	Unmarried		Married, with 2 children		
	Zlotys	U. S. currency	Zlotys	U. S. currency	
Chiefs of section.....	797	\$ 89. 26	992	\$111. 10	124
Secretaries.....	303	33. 94	439	49. 17	145
Clerks (first grade).....	264	29. 57	365	40. 88	138
Teachers in secondary schools.....	362	40. 54	463	51. 86	128
Messengers.....	146	16. 35	234	26. 21	168

### Czechoslovakia

THE scope of the family allowance system in Czechoslovakia is more restricted than it was some years ago. The allowances, however, are still being paid to certain industrial groups, especially coal miners. In coal mining these grants are provided for in collective agreements and constitute approximately 3 per cent of the total earnings of all workers. In the Moravia-Ostrava district, heads of families with at least 3 children receive allowances as follows, per shift worked:

FAMILY ALLOWANCES TO HEADS OF CERTAIN FAMILIES

	Crowns	U. S. currency (cents)		Crowns	U. S. currency (cents)
3 children.....	1.83	5.4	6 children.....	2.19	6.5
4 children.....	1.95	5.8	7 or more children.....	2.31	6.8
5 children.....	2.07	6.1			

These grants are made until the child is 14 years of age or until 18, when he is still attending school or is not capable of working.

The amounts allowed and the regulations for their payment are not the same in all mining districts. In some cases widows with or without children are accorded allowances, as are also unmarried workers in charge of children. Mine operators in Czechoslovakia also follow the custom of distributing larger quantities of coal to married workers and other workers with households than to single workers without households.

In June, 1926, after several years' suspension, a system of family allowances was again established for State officials. State administrative and judicial officials are accorded 1,800 crowns (\$53.28).

<sup>7</sup> Family allowances are also paid to officials in the legal service and to persons on military duty.

per annum for one child and 3,000 crowns (\$88.80) for several children. Salaried State employees receive annually 1,200 crowns (\$35.52) for one child and 2,100 crowns (\$62.16) for several children.

### Other European Countries

VARIOUS other European countries also pay family allowances in their State services. Among these countries are Austria, Bulgaria, Denmark, Estonia, Greece, Hungary, Italy, Latvia, the Netherlands, Spain, Sweden, Switzerland, and Yugoslavia. Such grants are also made to a limited extent in private industry.

The allowances are usually paid independently by individual employers, but in the Netherlands a number of equalization funds have been established. In Italy, family allowances are paid to all persons employed by the ministries and the autonomous public services, including railways, posts, and telegraphs, as well as in banking and in certain districts in industry. In Austria, family allowances are also paid in some branches of private industry, especially coal mining, and to salaried clerical employees, including those of the large banks in Vienna. In Switzerland, the system of family allowances is in force for Federal State servants, both officials and manual workers, including those of the Federal railways and the post office. Allowances are also paid by some cantonal and communal administrations and by a few private undertakings. The importance of the allowances varies greatly in the different countries and industries.

### Australia

THE problem as to whether the basic wage should meet the requirements of an average family or whether family needs should be taken care of by special allowances has aroused an immense amount of discussion in Australia in the last decade.

Since 1920 married officials in the Commonwealth Government have been receiving family allowances, and in 1927 an act was passed in New South Wales providing for family allowances to workers with small incomes. This led to a demand for uniform legislation on the matter throughout the Commonwealth, and to the appointment of a royal commission on child endowment and family allowances, which reported early in 1929,<sup>8</sup> the majority being against the establishment of a general compulsory system of family allowances and the minority in favor of some system of this kind.

The New South Wales child endowment act of 1927, referred to above, has been a storm center of controversy. This measure, it may be recalled, was introduced at the same time as the new industrial arbitration (living wage declaration) act of 1927, which stipulated that the unit for fixing the living wage should be a man and wife only instead of a family with two children. It was provided under the child-endowment or family-allowance system that employers contribute 3 per cent of their wages bill to meet the expense of paying 5s. (\$1.22) per week for each legitimate child under 14 years of age when the family income did not exceed the annual amount of the living wage based on the needs of a man and wife with no children plus the sum of £13 (\$63.26) for each child in the family. The employers' contributions have twice been temporarily discontinued by law, as the sum needed to meet the expenses of child endowment

<sup>8</sup> For summary of this report, see Labor Review, Washington, October, 1929, pp. 81-83.



was less than estimated, while under the act of April 8, 1929, the tax was cut to 2 per cent of the wages bill.

The chief controversy concerning the system has been over the family unit for which the living wage should be fixed. In June, 1927, Mr. Justice Piddington, the industrial commissioner, in his first basic wage declaration under the industrial arbitration act, providing a new family unit, slightly increased the old basic wage because of higher living costs, making such wage £4 5s. (\$20.68) for industrial, and £4 4s. (\$20.44) for rural workers. Employers opposed the declaration and demanded that the basic wage be reduced as the new family unit no longer included children who were, according to these industrialists, to be provided for under the family endowment act.

The industrial commission was reconstituted in order that it might have three members, and the problem of the basic wage was again taken up. In October, 1929, a majority of the commission decided on a reduction of the general basic wage to £3 12s. 6d. (\$17.64) and of the rural wage to £3 2s. (\$15.09). This reduction, however, was not to become effective until Parliament had had the opportunity to give consideration to the status of the law and its economic effects. Mr. Justice Piddington, the president of the commission, dissented with emphasis from this majority decision and declared that it represented a miscarriage of social justice.

In December, 1929, legislation was enacted with a view to bringing the child-endowment system into harmony with the wage-fixing system. Under the new provision the industrial commission, in deciding upon the basic wage, shall take into consideration the needs of a man with a wife and one child. An allowance will be paid for each child except the first in families with an income less than the amount of such living wage. In cases where the income of the family is above the living wage for adult males, the child endowment otherwise due will be reduced by the amount of such excess. In order to meet the expenses of the new scheme, employers are to be taxed 1 per cent of their wages bill paid under State, but not under Federal awards. The new basic wage was declared at £4 2s. 6d. (\$20.07).

#### New Zealand

THE New Zealand family allowance act of 1926 provided a grant of 2s (49 cents) per week for each legitimate child under 15 years of age, beginning with the third child, in families in the low-income groups. Special authorization is required to secure these benefits for the children of foreigners or Asiatics. Children who are already receiving pensions from the Government are not eligible for family allowances.

The accompanying statistical statement shows the operation of the above-mentioned law for the biennium ending March 31, 1929:

TABLE 6.—STATISTICS ON OPERATION OF FAMILY ALLOWANCE SYSTEM IN NEW ZEALAND FOR 2 YEARS ENDING MARCH 31, 1929

[Conversions into United States currency made on basis of £1=\$4.867]

Item	Year ending Mar. 31—	
	1928	1929
Number of families benefiting <sup>1</sup> .....	3,006	3,763
Total number of children of families in receipt of allowances <sup>1</sup> .....	16,066	18,884
Number of children in excess of 2.....	9,758	11,358
Total amount paid during year.....	\$183,252	\$266,668
Annual value of allowances in force <sup>1</sup> .....	\$226,593	\$278,899
Average allowance <sup>1</sup> .....	\$75.38	\$74.15

<sup>1</sup> At end of year.

## RECREATION

### Community Recreation in the United States in 1929

CONTINUED progress in the community recreation movement marked the year 1929 according to the annual report<sup>1</sup> of the Playground and Recreation Association of America for that year. The number of cities reporting recreation facilities and programs had increased from 872 in 1928 to 945 in 1929, reports being included from all but three of the cities in the United States having a population of more than 50,000. The number of trained workers had also increased steadily, these totaling 22,920, or 2,158 more than the previous year, while there was a similar increase in the number of volunteer workers. The salaries and wages of the employed leaders were reported for the first time, the salaries in 657 cities amounting to approximately \$7,060,000.

Separate play areas in charge of recreation leaders numbered 13,397, of which 1,137 were first opened in 1929. The recreation facilities provided, for the cities furnishing information, include 7,681 outdoor playgrounds, 2,341 indoor recreation centers, and 678 recreation buildings, part of these facilities being provided for colored residents. The total number of yearly or seasonal participants in the sports or games at the outdoor playgrounds is estimated on the basis of those cities reporting to have been more than 274,000,000, a figure which does not include the millions of people using the athletic fields, golf courses, bathing beaches, indoor centers, and other areas. Other recreation facilities reported included 1,709 athletic fields, 4,024 baseball diamonds, 409 bathing beaches, 310 indoor and 700 outdoor swimming pools, 7,960 tennis courts, 299 golf courses, 81 stadiums, and 115 summer camps.

The majority of the recreation programs are under the direction of municipal recreation commissions, departments, or boards, and in a number of cities municipal and private departments are combined in the management of the playgrounds and community centers. Only 259 cities report that private organizations maintain part or all of the recreation facilities.

The total expenditure for recreation in 1929 was reported as \$33,539,805.79—the largest amount yet reported in any year. This increase was due not to large expenditures for land, buildings, and permanent equipment but to the greater amount expended for salaries and wages. The source of support for the community recreation was in the majority of cases from municipal and county funds, nearly 84 per cent of the total expenditures coming from this source, while more than 12 per cent was secured through fees and charges, and only 4 per cent came from private sources.

<sup>1</sup> Playground and Recreation, New York, May, 1930, pp. 63-73.



# HEALTH AND INDUSTRIAL HYGIENE

## Pulmonary Asbestosis

**T**HE steadily increasing use of asbestos in industrial processes has created a new occupational risk and added to the list of industrial lung affections a new form of chronic pulmonary fibrosis. An account of the conditions under which the asbestos-containing rock is mined or quarried and the raw asbestos converted into finished material, together with the results of exposure to these processes, is given by Sir Thomas Oliver in a recent article.<sup>1</sup>

Asbestos, which possesses both mineral and vegetable characteristics, is found in many parts of the world, in rock to which the fine silk-like asbestos fibers are adherent, the types of asbestos in greatest demand for industrial purposes being found in Italy, Russia, Canada, and South Africa. Although the asbestos fibers appear light and fleecy, they are as dense and heavy as the rock itself. In spite of this fact, however, the material can be spun into fine thread, into coarse cord, woven into cloth, or so compressed as to form solid blocks. The chemical analysis shows that the main constituents of the asbestos are magnesia, silica, and oxide of iron, with traces of sodium, potassium, and aluminium. The Italian and Canadian asbestos contains mainly magnesia and silica with only 3 and 5.75 per cent of oxide of iron, respectively, while the South African asbestos contains 40 per cent of oxide of iron and only 2 per cent of magnesia. The proportion of silica in the three kinds of asbestos ranges from 41 to 50 per cent.

In a visit by the writer to the asbestos quarries in Thetford, Canada, it was found that the quarries were deep and the work of mining, therefore, hazardous but that there was comparatively little dust evolved even in the crushing mills until the processes of milling and screening were reached, when there was considerable dust produced. Other processes in cleaning the asbestos fibers from rock, in separating the long fibers from the short, and in carding and spinning and weaving were all found to be productive of dust.

Doctor Oliver reports the results of the examination of English workers who had been engaged for many years in the manufacture of asbestos products. A woman aged 61 who had been employed in an asbestos factory for 25 years, with few intermissions, showed the effects of the dust exposure in the altered respiratory sounds, a respiratory capacity of only 1 inch, pulse rate of 90 and respirations of 22 per minute. A daughter of this woman, who had been an asbestos worker for 16 years, had a dry cough, slight dyspnea, slight dullness over the base of each lung, and deficiency of the respiratory murmur with fine crepitating râles heard over the bases. In both of these

<sup>1</sup> Archiv für Gewerbepathologie und Gewerbehygiene, Berlin, 1930, Vol. 1, Nos. 1 and 2: "Pulmonary asbestosis—a socio-medical study," by Sir Thomas Oliver.

cases the yellow foreign bodies<sup>2</sup> found in the lungs or in the sputum, which are characteristic features of asbestosis, were demonstrated. These foreign bodies are described by Doctor Oliver as varying in tint from a faint yellowish green color through golden yellow to a deep brown.

E Anatomical examination of the lungs of persons who had been subjected to the inhalation of asbestos dust for several years showed "well-marked diffuse interstitial pneumonia with chronic bronchitis and emphysema; well-marked anthracosis; in some a pronounced tuberculous condition with chronic phthisis" as well as the type of foreign bodies, already referred to, in the alveoli, bronchi, bronchioles, and the interstitial fibrotic areas.

There is decided differentiation between the appearance of the lungs of workers exposed to silica dust and those exposed to asbestos dust. An investigation by a member of the South African Institute for Medical Research, quoted by Doctor Oliver, has described the pathological lesions found in the lungs of four natives who had been working in an asbestos mine in Southern Rhodesia. He states that "while the pulmonary fibrosis is patchy and is mainly related to the vascular system and bronchi, with here and there lymphocytic accumulations, there is 'no resemblance to the orderly whorled arrangement and sharp definition of the silicotic nodule'; nor evidence of it in some of the cases of tuberculosis, which when present had evidently been sequential to the fibrosis."

A report on pulmonary asbestosis by Dr. E. R. A. Merewether and C. W. Price, respectively, medical and engineering inspectors of factories in Great Britain, is reviewed in the editorial columns of *The Lancet*, April 19, 1930. The investigation on which this report is based was made during 1928 and 1929 as a result of the discovery of nontuberculous fibrosis in the lungs of an asbestos worker of sufficient severity to require hospital treatment.

In this study only workers who were using more or less pure asbestos were included, so as to rule out any complicating factors caused by other dusty substances. It was estimated that about 2,200 workers were employed in England in these processes. Physical examinations were given to 363 workers, or 16.5 per cent of the estimated total workers in the industry. A certain degree of selection was exercised in the examination, as only newcomers and long-time workers were chosen. Of the men examined, all but one were at work on the day of examination. In 95 cases, or 26.2 per cent, there was a diffuse fibrosis which was attributable to the inhalation of dust, while in 21 cases there were precursory symptoms of the disease. In 133 cases radiograms were made, 62 of which showed definite diffuse fibrosis, while 25 were suggestive of fibrosis. As the whole body of workers were not examined it is pointed out that it would be unfair to assume that roughly 1 in 4 asbestos workers have fibrosis, especially as a large proportion of the men examined had been five years or more in the industry. The examinations showed that there were no cases of fibrosis among workers who had been employed less than four years, while there were 36 cases among those with employment of 5 to 9 years, 27 cases among those employed 10 to 14 years, 15 among those employed 15 to 19 years, and 17 cases among those employed

<sup>2</sup> See *Labor Review*, February, 1930, p. 82.

over 20 years. The largest number of cases was found between the ages of 30 and 50 but it is considered that length of exposure rather than age is the important factor in the development of the disease. While it was difficult to relate the incidence of asbestosis to the occupation, owing to the fact that frequently many processes are housed in one room and workers are transferred from one process to another, there was found to be a lower incidence and probably a later onset among the spinners as a group than among those who crush, card, or weave the asbestos. There was no evidence produced to show that one variety of asbestos is more capable of producing fibrosis than another, the degree of concentration of the dust and length of exposure being the important factors. It appears that disablement from the disease is even more delayed than in the case of silicosis, the affected worker often continuing at work with occasional breakdowns from bronchitis until he is aware of shortness of breath upon exertion. This is attributed both to the character of the disease and the fact that the work as a rule is not strenuous. In some cases there is a period of invalidism before death, while in others broncho-pneumonia or other acute affection may supervene while the man is still at work.

The report records 10 cases up to the end of 1929 in which an advanced degree of asbestosis without tuberculosis was the primary cause of death, verified in nine cases by post-mortem examinations. The length of exposure varied in these cases from 9 to 24 years. The rate of progress of the disease varies. In cases in which there is continued exposure to high concentrations of the dust the fibrosis may be fully developed in from 7 to 9 years, while with milder degrees of exposure it may take from 15 to 25 years to develop fully. The data, so far, show no special liability to pulmonary tuberculosis among asbestos workers.

The report points out that special exhaust ventilation is necessary to remove dust in these industries especially in the processes of spinning and weaving. The recommendations in the report include the application of efficient localized exhaust ventilation at dust-producing points; the substitution of inclosed mechanical methods for hand conveyance and for dusty handwork generally; the effective inclosure of dust-producing machines and plant; and the substitution of wet methods for dry. It is considered that young persons should not be employed on specially dusty work.



# INDUSTRIAL ACCIDENTS

## Relative Responsibility of Management and Workers for Mine Accidents

THE relative responsibility of management and workers for accidents in mines is the subject of a recent report of the United States Bureau of Mines.<sup>1</sup> The discussion centers chiefly in the main causes of such accidents—falls of men or material, haulage, explosions, explosives, and electricity—and methods for their elimination.

*Falls of men or material.*—Nearly half of the fatalities in mines are due to falls of persons or material. According to the report, many of these accidents are the fault of the workers, who generally know the dangers and how to safeguard themselves but often will not take the necessary precautions unless compelled to do so. On the other hand, it is the duty of the employer to furnish the necessary timber, etc., for use in keeping the work place safe, and this, the report states, in many cases is not done. Sometimes the amount of material supplied is insufficient, is not the right size, or is not placed where it is easily accessible.

The noise made by modern machinery in use at or near the face is mentioned as a contributing cause of accidents from falls of material, as it prevents the workers from hearing the preliminary chipping or cracking which was a warning and a protection under the older methods of mining. However, this noise can be reduced through the use of inclosed gears, application of oil or water on moving parts, and increased supervision and inspection. Stopping of the machinery at stated intervals to permit the workers to "look and listen" is suggested. "In any event there should be systematic, ample timbering, or other overhead protection wherever machinery is used at or near faces."

To guard against the negligence of the workers, it is suggested that "for every 20 to 30 face workers there should be a competent, intelligent, supervisory official in direct charge who should visit and inspect every working place at least three or more times per day and have full authority to require immediate compliance with safety instructions, generally remaining until the instructed work is completed."

*Haulage.*—The most prolific source of haulage accidents is said to be insufficient clearance between roof, ribs, or timbers, and the sides or tops of cars or locomotives. Among the other causes mentioned are unsafe methods of transporting men into the mines; unsuitable or unsafe man trips, cages, or skips; accumulations of material or débris on haulage roads; improper timbering; flying switches; pushing of cars, and particularly trips of cars, by power contrivances; and lack of safety devices or improper maintenance of them. On the part of the workers, unsafe practices, carelessness,

<sup>1</sup> United States. Department of Commerce. Bureau of Mines. Report of investigations 2993: Some phases of the relative responsibility of management and workers for accidents in mines, by D. Harrington. Washington, 1930. (Mimeographed.)

and neglect to use the safety devices provided also contribute largely to such accidents. Numerous suggestions looking toward the elimination of haulage accidents are made.

*Explosions.*—Approximately 300 men are killed annually by explosions of gas or dust in coal mines, and this type of accident the writer considers the least excusable of all, as "it is almost a certainty that if known precautions against explosions were put into effect universally in our coal mines, explosions would be eliminated and the increased cost of producing our coal to bring about this happy result would be much less than 10 cents per ton." While the prevention of explosions is more definitely under the control of the operator than of the individual employees, many of these disasters have been due to the carelessness of the employees or their violation of regulations regarding smoking, the use of open lights, failure to use the proper explosive, etc.

*Explosives.*—Discontinuance in many mines of the use of black powder and dynamite for blasting, and changes in blasting methods, have reduced the number of accidents from this cause. Nevertheless, the report states, black powder and dynamite are still used in probably more than half of the coal mines in this country and some companies average one or more fires each week from blasting with these explosives. The practice of firing adobe, mud-capped, or sand-blast shots in coal mines, although fraught with very grave danger to all persons in the mine at the time of firing, is not only permitted but is said to be advocated by many mining men and mining companies. Careless handling and storage of explosives are likewise common. The individual worker is in many cases responsible for accidents resulting from explosives, through "carelessness, bravado, and obstinacy" or violation of the rules for blasting. Many progressive mines and some States require that all mine blasting be done by special men after the general working shift is out of the mine, and in the writer's opinion the prevention of accidents from blasting seems to require not only that all blasting should be done by special shot firers but that these shot firers should be carefully selected, well-qualified safety men who are given definite instructions and who are closely supervised to insure safe blasting practices at all times.

*Electricity.*—Electricity is one of the most frequent causes of injury in mines, through contact shocks or burns and the starting of explosions and fires. The report states that the total number of deaths annually due to electricity is usually over 200 and that "electrical installations and electrical practice in our mines have not been at all adequately safeguarded and, at least as regards coal mining, the tendency seems to be toward the worse rather than toward the better." The electrically operated machinery and devices in our present-day mines offer many opportunities to the workers to indulge in dangerous practices, and the writer points out that if the mines, with their tendency to intensive mechanization, are to be operated with anything like due regard to safety, more care will be required in the selection and placing of electrical equipment as well as much closer supervision and more frequent and more rigid inspection of this equipment and of the methods of using it.



### Reduction of Accidents in Industry

A RECENT study of industrial accidents, entitled "Is It Safe to Work,"<sup>1</sup> attempts to answer the question "Why must thousands of persons be killed and injured annually in American industry, when reliable authorities agree that 75 per cent, or more, of all accidents could be avoided?"

Statistics of accidents in industry are not available for the entire country, as several States have no workmen's compensation laws and no records of accidents and other States which do have compensation laws do not publish the number and type of injuries compensated. Based in part upon previous estimates made by various authorities and upon certain actual figures, the author places the total annual number of fatal injuries at 16,606 and the number of nonfatal injuries at 2,604,637. These figures, however, he regards as "more in the nature of minimums than maximums. The annual number of fatalities may be as great as 20,000." The annual wage loss due to industrial accidents is placed at over \$1,000,000,000, and the total annual loss at "probably \$4,000,000,000," in which are included cost of medical and surgical attention, the overhead cost connected with the payment of claims, and a heavy indirect cost.

The lack of progress made by the safety movement is attributable to many causes, but one of the most important is the lack of interest manifested by medium-sized and small concerns. The number of accidents in plants considered too small to have accident problems is said to be wholly out of proportion to the number of workmen employed. The unsatisfactory safety position of the smaller firms is indicated by the reluctance of stock casualty insurance companies to insure some of the smaller firms. Inadequate State inspection and the increasing mechanization of industry are also important factors, to which may be added negligence of employers and workers, and many lesser causes.

When workmen's compensation laws were introduced it was thought that they would be effective in reducing the number of industrial accidents. However, although some improvement in accident prevention took place in the years immediately following the passage of the laws, "the compensation system as it is now functioning is not able to keep the number of industrial injuries down to the desired minimum." The reason for this, the writer indicates, is the small cost to the individual employer.

The injury expense account is relatively small because injury benefits are small. Injury benefits are small because human beings are not rated at their true economic value. If industry had to pay the actual loss caused by industrial injuries, the safety problem would loom larger in the average company's affairs; the tactics employed in preventing injuries would correspond to the new importance of the enterprise. The program for safety would be changed with the same regularity and effectiveness which characterize the commercial advertisements blazoned on thousands of billboards. It would not only be a question of producing goods and selling them at a profit, but of producing goods with an injury record sufficiently low to make profits possible.

\* \* \* In short, safety must be made the counterpart of savings, and industrial casualties the cause of business losses. It is in these savings, or losses—this differential between any one firm and its competitors—that the possibility of additional injury reduction lies.

<sup>1</sup> Bowers, Edison L. *Is it safe to work? A study of industrial accidents.* Boston, Houghton Mifflin Co., 1930.



It is suggested, therefore, that companies having low accident rates should pay a smaller compensation insurance premium than those with high accident rates, and that the difference in the rates should be great enough to make injuries so expensive that the company with the poor record will find itself at a competitive disadvantage as a result of its failure to make its plant safe.

The author believes that a scientific treatment of the injury problem has been impossible because of the conditions surrounding the passage and administration of accident, compensation, and vocational rehabilitation legislation. In his study he treats of accident prevention, workmen's compensation, and vocational rehabilitation "as integral parts of an attempt to have goods and services produced with a minimum of sacrifice on the part of workers. Accident prevention is made the desired goal; workmen's compensation is regarded as the best tool to promote safety; vocational rehabilitation is conceived as the remedy to be used only when safety is not realized."

The basic problem under consideration, then, seems to be to find ways and means of making industrial accidents more costly to employers than heretofore, and at the same time of retaining the proper incentive for disabled persons to accept retraining. To differentiate between the careless and the careful employer, to conserve earning capacity whenever possible, and then to compensate for whatever deficiency remains, constitute the program. Such a program is possible only when prevention, compensation, and retraining are viewed as related parts of one comprehensive whole.

### Coke-Oven Accidents in the United States in 1928

THE report of the United States Bureau of Mines on accidents in the coke-oven industry in the United States during 1928<sup>1</sup> shows that accident rates for the industry as a whole in 1928 were the lowest ever reported, the death rate being 0.78 and the injury rate 46.61 per 1,000 300-day workers, as compared with rates of 1.08 and 55.33, respectively, for 1927, which had the next lowest figures. The actual number of fatalities (17) in 1928 was also the lowest on record except for the year 1921, when the number was the same as for 1928, and the number of nonfatal injuries (1,012) was lower than in any previous year. The exact amount of time lost on account of accidents is not known, but the Bureau of Mines estimates that for each of the 1,029 injuries and deaths which occurred in 1928 the average time lost was 137 days.

There were 1,277 fewer workers employed in the industry during 1928 than in 1927 and there was a decrease of 454,106 in the number of days of labor performed. The average number of days worked per man in 1928 was 336 as compared with 337 in 1927, but the average for beehive ovens was only 216 against 359 for by-product plants.

<sup>1</sup> United States, Department of Commerce. Bureau of Mines. Technical paper 468: Coke-oven accidents in the United States during the calendar year 1928, by W. W. Adams and L. Chenoweth. Washington, 1930.

The data given in the report are based on reports from 67 companies operating 10,452 beehive ovens in all and from 76 companies operating a total of 9,513 by-product ovens. There is some slight duplication in the number of operating companies in cases where they have ovens in more than one State, as each company is counted once for each State in which it has ovens. Only active plants were included in the tabulations.

The report indicates that by-product ovens are rapidly supplanting beehive ovens, the number of men employed in beehive ovens having decreased from 18,570 in 1916 to 3,161 in 1928 and the number of days of labor performed from 5,577,341 to 683,794, whereas the number of employees in by-product ovens during the same period increased from 13,033 to 16,229 and the days of labor performed from 4,658,333 to 5,829,135.

Table 1 shows the number of employees, days worked, and fatalities and injuries at all coke ovens for the years 1916 to 1928.

TABLE 1.—NUMBER OF EMPLOYEES, DAYS OF LABOR PERFORMED, FATALITIES, AND INJURIES AT COKE OVENS IN THE UNITED STATES, 1916 TO 1928

Year	Average days ovens were active	Men employed		Days of labor performed	Number killed		Number injured	
		Actual number	Equivalent in 300-day workers		Total	Per 1,000 300-day workers	Total	Per 1,000 300-day workers
1916.....	324	31,603	34,119	10,235,674	45	1.32	5,237	153.49
1917.....	329	32,417	35,595	10,678,429	76	2.14	6,713	188.59
1918.....	329	32,389	35,476	10,642,688	73	2.06	7,792	219.64
1919.....	289	28,741	27,674	8,302,059	53	1.92	4,031	145.66
1920.....	319	28,139	29,921	8,976,214	49	1.64	3,415	114.13
Average <sup>1</sup> .....	319	30,658	32,557	9,767,013	59	1.82	5,438	167.02
1921.....	257	16,204	13,868	4,160,298	17	1.23	1,853	133.62
1922.....	284	19,278	18,236	5,470,939	29	1.59	1,710	93.77
1923.....	324	23,729	25,627	7,688,160	45	1.76	2,593	101.18
1924.....	303	20,451	20,681	6,204,448	24	1.16	1,645	79.54
1925.....	310	23,254	24,054	7,216,239	28	1.16	1,696	70.51
Average <sup>1</sup> .....	299	20,583	20,493	6,148,017	29	1.40	1,899	92.68
1926.....	315	23,115	24,288	7,286,605	51	2.10	1,922	79.13
1927.....	337	20,667	23,223	6,967,035	25	1.08	1,285	55.33
1928.....	336	19,390	21,710	6,512,929	17	.78	1,012	46.61

<sup>1</sup> Calculations based on the sum of 5 years rather than on the average of 5 years.

The main causes of fatal accidents were coke cars and motors, railway cars and locomotives, electricity, falls of persons, and run of coal and coke. The most frequent causes of nonfatal accidents were burns, falls of persons, handling of objects, falling objects, and hand tools. The percentage of fatal and nonfatal injuries combined, due to the various causes, in the years 1923 to 1928, is shown in Table 2 for each type of oven.

TABLE 2.—PER CENT OF INJURIES AT BEEHIVE AND BY-PRODUCT COKE OVENS DUE TO EACH SPECIFIED CAUSE, 1923 TO 1928

Cause	1923	1924	1925	1926	1927	Average, 1923-1927	1928
<i>Beehive ovens</i>							
Cars, lorries, and motors.....	12.69	8.97	8.83	12.87	12.89	11.44	8.75
Railway cars and locomotives.....	1.60	1.97	1.41	2.48	3.83	2.06	2.50
Coke-drawing machines.....	5.14	2.85	2.41	2.79	3.14	3.51	6.25
Electricity.....	1.03	1.53	1.40	.62	1.74	1.16	.60
Falls of persons.....	14.86	14.44	10.04	10.70	10.80	12.53	14.37
Hand tools.....	8.57	7.00	11.65	7.91	8.01	8.65	8.75
Suffocation from gases.....		.22				.04	
Burns.....	11.20	7.22	8.63	8.22	8.71	9.13	8.13
Gas explosions.....	.11		.20		.70	.15	
Dust explosions.....	.11		.20	.46		.18	
Falling objects.....	13.72	10.94	15.26	13.80	11.50	13.32	9.35
Nails, splinters, etc.....	3.32	1.10	2.21	4.18	3.14	2.93	2.30
Run of coal or coke.....	.11	.22	1.41	1.24	3.83	1.01	.60
Handling objects <sup>1</sup> .....							3.12
Other causes.....	27.54	43.54	36.35	34.73	31.71	33.89	35.00
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>By-product ovens</i>							
Cars, lorries, and motors.....	6.98	7.58	7.10	5.32	5.11	6.49	5.65
Railway cars and locomotives.....	1.16	1.52	2.09	1.96	3.01	1.85	2.45
Coke-drawing machines.....	2.97	1.60	1.84	1.72	1.30	1.99	2.35
Electricity.....	1.34	1.94	1.34	1.10	1.70	1.46	2.25
Falls of persons.....	16.01	12.79	12.94	15.43	13.33	14.30	12.55
Hand tools.....	10.01	6.99	8.10	7.13	10.52	8.59	7.80
Suffocation from gases.....	1.34	1.09	1.08	1.57	1.90	1.38	1.64
Burns.....	16.12	13.97	15.69	12.68	12.73	14.42	14.44
Gas explosions.....	1.34	1.01	.50	4.62	1.10	1.74	.82
Dust explosions.....	.06	.59	1.00	.23	.10	.37	
Falling objects.....	11.70	11.70	12.52	11.12	14.33	12.15	8.69
Nails, splinters, etc.....	2.68	1.94	2.50	3.37	2.91	2.68	5.16
Run of coal or coke.....	1.51	1.09	1.00	1.33	1.80	1.35	2.00
Handling objects <sup>1</sup> .....							11.85
Other causes.....	26.78	36.19	32.30	32.42	30.16	31.23	22.30
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

<sup>1</sup> Not segregated prior to 1928.

At beehive ovens the prevailing workday was about evenly divided between 8 and 9 hour shifts, only a small number of men being employed at ovens where the workday was 10 hours and still fewer in plants where the length of shift was not reported. At by-product ovens 80 per cent of the employees worked an 8-hour day, 5 per cent a 12-hour day, and 2 per cent a 10-hour day, the workday of the remainder not being reported. As it was thought that the length of the working-day would very likely affect the probability of injury to employees, fatality and injury rates per million hours of exposure were calculated by the Bureau of Mines for the 8-hour, 9-hour, and 12-hour day, by character of disability, for the years 1927 and 1928, as shown in Table 3.



TABLE 3.—FATALITIES AND INJURIES PER MILLION HOURS OF EXPOSURE, IN BEEHIVE AND BY-PRODUCT COKE OVENS, BY LENGTH OF SHIFT, 1927 AND 1928

Character of disability	1927			1928		
	8 hours	9 hours	12 hours	8 hours	9 hours	12 hours
<i>Beehive ovens</i>						
Fatal		0. 566			1. 163	
Serious (time lost more than 14 days):						
Permanent total disability		. 283		0. 422	. 388	
Permanent partial disability	7. 602	8. 488		5. 485	9. 691	
Others	23. 100	33. 670		15. 190	20. 544	
Slight (time lost 1 to 14 days, inclusive)						
Total injuries	30. 702	42. 441		21. 097	30. 623	
Total fatalities and injuries	30. 702	43. 007		21. 097	31. 786	
<i>By-product ovens</i>						
Fatal	0. 363		0. 820	0. 293		0. 269
Serious (time lost more than 14 days):						
Permanent total disability						
Permanent partial disability	. 959		. 205	. 666		. 537
Others	5. 182		4. 508	3. 970		6. 178
Slight (time lost 1 to 14 days, inclusive)	11. 271		16. 801	11. 722		7. 252
Total injuries	17. 412		21. 514	16. 358		13. 967
Total fatalities and injuries	17. 775		22. 334	16. 651		14. 236

## Coal-Mine Fatalities in the United States in 1928

THE death rate per thousand 300-day workers in coal mines in 1928 was 5 per cent higher than in 1927, the rate for 1928 being 4.64 as compared with 4.43 for 1927, according to the report of the United States Bureau of Mines (Bulletin No. 319) on coal-mine fatalities in the United States in 1928. The number of deaths per million tons of coal produced also increased from 3.73 in 1927 to 3.78 in 1928. The actual number of deaths which occurred in 1928 (2,176) was 55 fewer than in 1927, but as some 10 per cent fewer workers were employed in the industry in the later year the number of deaths in proportion to the number of men employed was greater.

Output per man per day increased from 3.96 tons in 1927 to 4.10 tons in 1928. Only once before in the history of the coal industry had the daily output per worker exceeded 4 tons (4.04 tons in 1925) and the Bureau of Mines states that "never before in the history of coal mining in the United States has the average miner produced as much coal in a day's time as he did in 1928." The tonnage of coal produced in 1928 for each life lost was likewise, with four exceptions, larger than ever before. The total production in 1928 was 576,093,039 short tons. The average number of days worked per man during the year was 206 as compared with 199 in 1927.

The Bureau of Mines does not collect information on the number of persons injured in coal mines.

Table 1 shows the number of workers employed, days worked, number of fatalities, and production per man, 1906 to 1928.

TABLE 1.—NUMBER OF WORKERS, NUMBER OF FATALITIES, AND PRODUCTION IN COAL MINES, 1906 TO 1928

Year or period	Men employed		Average days active	Men killed		Production per death (short tons)	Average production per man		Deaths per million tons
	Actual number	Equivalent in 300-day workers		Number	Rate per 1,000 300-day workers		Tons per year	Tons per day	
1906-1910 <sup>1</sup> (average).....	675,067	484,454	215	2,658	5.49	169,719	668	3.10	5.89
1911-1915 (average).....	739,169	541,489	220	2,517	4.65	210,253	716	3.26	4.76
1916-1920 (average).....	760,381	599,781	237	2,419	4.03	258,944	824	3.48	3.96
1921-1925 (average).....	811,803	484,071	179	2,215	4.58	252,346	689	3.85	3.96
1926.....	759,033	559,426	221	2,518	4.50	261,241	867	3.92	3.80
1927.....	759,177	503,065	199	2,231	4.43	267,978	788	3.96	3.73
1928.....	682,831	468,680	206	2,176	4.64	264,749	844	4.10	3.78

<sup>1</sup> Figures for the years 1906 to 1909, inclusive, were only for States under inspection service. Figures for 1909 as to average days active were estimated by the Bureau of Mines.

Table 2 shows the number of deaths resulting from the various causes, with the rate per thousand 300-day workers and per million tons mined, 1927 and 1928.

TABLE 2.—FATALITIES AT COAL MINES, 1927 AND 1928, BY CAUSE

Cause of accident	Number killed		Killed per 1,000 300-day workers <sup>1</sup>		Deaths per million tons	
	1927	1928	1927	1928	1927	1928
<b>Underground:</b>						
Falls of roof or face.....	1,149	1,068	2.71	2.71	1.92	1.85
Mine cars and locomotives.....	355	361	.84	.91	.50	.63
Explosions of gas or coal dust—						
Local explosions.....	98	50	.23	.13	.16	.09
Major explosions.....	149	326	.35	.82	.25	.57
Explosives.....	110	74	.26	.19	.18	.13
Electricity.....	100	88	.24	.22	.17	.15
Mining machines.....	28	24	.06	.07	.05	.04
Mine fires.....	4	1	.01	( <sup>2</sup> )	.01	( <sup>2</sup> )
Miscellaneous.....	87	75	.21	.19	.15	.13
Total, underground.....	2,080	2,067	4.91	5.24	3.48	3.59
<b>Shaft.....</b>	29	25	.07	.06	.05	.04
<b>Surface:</b>						
Haulage.....	46	41	.58	.55	.08	.07
Machinery.....	10	15	.13	.20	.01	.03
Miscellaneous.....	66	28	.83	.38	.11	.05
Total, surface.....	122	84	1.54	1.13	.20	.15
Grand total.....	2,231	2,176	4.43	4.64	3.73	3.78

<sup>1</sup> Underground rates based on underground employees; surface rates based on surface employees.

<sup>2</sup> Less than 0.005.

Although the fatality rate for the country as a whole increased in 1928 over 1927, the rates for a number of the States decreased, as is indicated in Table 3, showing the relative standing in 1928 of States producing 1,000,000 tons or more of coal.

TABLE 3.—FATALITY RATES PER 1,000 300-DAY WORKERS IN STATES PRODUCING 1,000,000 TONS OR MORE OF COAL, 1927 AND 1928

State	Rate		State	Rate	
	1927	1928		1927	1928
Maryland.....	1.97	1.17	Colorado.....	6.88	4.40
Texas.....	1.77	2.03	Virginia.....	4.20	4.43
Kansas.....	2.80	2.75	Iowa.....	4.51	4.68
Tennessee.....	2.83	3.05	Pennsylvania (bituminous).....	3.42	5.31
Missouri.....	2.55	3.07	Ohio.....	5.24	5.67
Indiana.....	4.00	3.34	West Virginia.....	6.31	5.69
Alabama.....	4.37	3.52	New Mexico.....	6.22	5.73
Montana.....	9.19	3.58	Oklahoma.....	7.90	6.87
North Dakota.....	2.66	3.82	Wyoming.....	6.04	7.24
Pennsylvania (anthracite).....	3.94	3.85	Utah.....	11.16	8.44
Kentucky.....	3.79	3.96	Arkansas.....	5.31	12.07
Washington.....	9.21	3.97			
Illinois.....	3.57	4.18	United States.....	4.43	4.64

Fatality rates for anthracite and for bituminous mines, and for both types of mines combined, are given in Table 4 by 5-year periods from 1891 to 1925 and by years, 1926 to 1928.

TABLE 4.—FATALITY RATES IN COAL MINES, BY 5-YEAR PERIODS, 1891 TO 1925, AND BY YEARS, 1926 TO 1928<sup>1</sup>

[Based on both underground and surface accidents]

Year or period	Bituminous mines			Anthracite mines			Both types of mines		
	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined	Per 1,000 employed	Per 1,000 300-day workers	Per million tons mined
1891-1895.....	2.60	4.02	4.84	3.27	4.99	8.12	2.91	4.38	5.87
1896-1900.....	2.90	4.06	4.46	3.03	5.58	7.94	2.95	4.50	5.34
1901-1905.....	3.40	4.81	5.17	3.36	5.38	7.69	3.45	4.95	5.67
1906-1910.....	4.01	5.57	5.50	3.70	5.25	7.67	3.94	5.48	5.89
1911-1915.....	3.27	4.75	4.31	3.52	4.37	6.95	3.40	4.65	4.76
1916-1920.....	3.05	4.03	3.48	3.70	4.06	6.07	3.18	4.03	3.86
1921-1925.....	2.70	4.87	3.67	2.83	3.71	5.80	2.73	4.58	3.96
1926.....	3.48	4.86	3.60	2.74	3.37	5.36	3.32	4.50	3.83
1927.....	2.93	4.60	3.36	2.96	3.94	6.11	2.94	4.43	3.73
1928.....	3.31	4.90	3.45	2.78	3.85	5.93	3.19	4.64	3.78

<sup>1</sup> Prior to 1910 certain States did not maintain records of accidents. The above rates are based exclusively on tonnage and men employed in States for which accident records are available.

In 1928 the majority of the workers (93 per cent) in the coal industry had an 8-hour day, less than 5 per cent of the total number employed worked a 9-hour day, and only 2 per cent had a 10-hour day or a day of other than 8 or 9 hours. The working day in the anthracite mines of Pennsylvania has been fixed at 8 hours since 1916.

### Accidents in Mines and Mills in Idaho, 1929

THE accompanying table on mine and milling accidents in Idaho in 1929 is compiled from the thirty-first annual report of the State inspector of mines for that year:



## ANALYSIS OF 1,005 MINING AND MILLING ACCIDENTS IN IDAHO, 1929

Severity of injury	Mine accidents				Milling accidents			
	Under-ground	Shaft	Surface	Total	Mill	Smelt-ing	Auxil-iary	Total
Total disability.....	15	1	2	18	1	1		2
Permanent partial disability.....	19	1	7	27	1	2		3
Temporary disability with time loss of—								
Over 14 days.....	349	6	53	408	21	25	11	57
1 to 14 days.....	375	6	52	433	26	22	9	57
Total.....	758	14	114	886	49	50	20	119

Of the 1,005 accidents occurring in the year reviewed, 20 were fatal, an increase of 7 over the preceding 12 months. There was a decrease, however, of 122 in the number of minor accidents in 1929 as compared with 1928. The low accident rate, 0.45 per 1,000 man-shifts can be largely attributed, according to the report, to the safety organizations and first-aid training of the men by the more important mining companies and to the interest and efforts of those in charge of safety activities, including close supervision.

## Fatal Industrial Accidents in Canada, 1928 and 1929

THE following statistics on fatal industrial accidents in Canada in the calendar years 1928 and 1929 are taken from the Canadian Labor Gazette of March, 1930:

	1928 <sup>1</sup>	1929		1928 <sup>1</sup>	1929
Agriculture.....	194	152	Transportation and public utilities.....	387	353
Logging.....	176	217	Trade.....	64	50
Fishing and trapping.....	43	50	Finance.....		1
Mining, nonferrous, smelting and quarrying.....	260	226	Service.....	102	108
Manufacturing.....	201	236			
Construction.....	250	289	Total.....	1,677	1,682

<sup>1</sup> Revised figures.

# WORKMEN'S COMPENSATION

## Recent Workmen's Compensation Reports

### Maryland

THE fifteenth annual report of Maryland Industrial Accident Commission presents statistics covering the experience under the workmen's compensation act during the fiscal year ending October 31, 1929.

The commission requires reports of all accidents causing loss of work or necessitating medical attention, but only injuries which involve disability of more than three days are entitled to compensation.

The following tabulation shows a digest of the main features in the experience of the act during the fiscal year, November 1, 1928, to October 31, 1929.

#### Claims:

Employers insured under act.....	14, 507
Industrial accidents reported.....	43, 607
Fatal claims filed.....	167
Nonfatal claims filed.....	14, 813
Claims pending November 1, 1928.....	422
Claims disposed of.....	14, 763
Claims disallowed or withdrawn.....	616
Claims pending October 31, 1929.....	629

#### Benefits:

Amount of compensation paid on awards.....	\$1, 620, 142. 36
Reported medical expense in nonclaim cases.....	412, 759. 59
Outstanding for future payments on awards.....	499, 936. 65
Total amount paid or outstanding.....	2, 532, 838. 60

#### Administrative expense for fiscal year, October 1, 1928, to September 30, 1929:

Total for industrial accident commission.....	112, 266. 23
Administration of State accident fund.....	<sup>1</sup> 30, 632. 12
Net for industrial accident commission.....	<sup>2</sup> 81, 634. 11

#### Maintenance tax for calendar year 1928:

Total expense for industrial accident commission.....	110, 565. 66
Administration of State accident fund.....	<sup>3</sup> 30, 972. 48
Net expense for industrial accident commission.....	<sup>3</sup> 79, 593. 18

#### Total pay roll, State accident fund, insurance companies, and self-insurers.....

Assessment per \$10,000 of pay roll.....	293, 528, 722. 27
	2. 7116

Tables are presented in the report, showing compensable claims allowed during the year by extent of injury, according to wages,

<sup>1</sup> Includes \$1,929.85 for rent.

<sup>2</sup> Includes \$9,070.15 for rent.

<sup>3</sup> Includes rent.

age and sex, mechanical or nonmechanical cause of injury, occupation of the injured, and industry. A summary of the industrial tabulation is given in the table following:

NUMBER OF COMPENSATION CASES ALLOWED IN MARYLAND, NOVEMBER 1, 1928, TO OCTOBER 31, 1929, BY INDUSTRY

Industry	Extent of injury		
	Fatal	Permanent partial	Temporary total
Agriculture.....			65
Mining, metallurgy, and quarrying.....	7	32	667
Other extractive industries.....		7	90
Manufacturing.....	35	385	6,692
Construction.....	16	98	2,768
Transportation and public utilities.....	12	54	1,631
Trade.....	1	20	609
Clerical and professional service.....	2	6	242
Miscellaneous industries.....	6	8	291
Department of State, cities, and counties of Maryland.....	5	11	327
Total.....	84	621	13,442

The annual report of the superintendent of the State accident fund, which is included, shows a surplus of \$500,000 protected by reinsurance, a reserve for unpaid claims of \$350,620, and an increase during the year in assets of \$35,761. The expense ratio of the fund during the year was 8 per cent of the premiums written, a reduction of 16½ per cent of the expense ratio for the previous year.

A condensed statement of the financial condition of the fund follows:

*Condition of the State Accident Fund of Maryland November 1, 1928 to October 31, 1929*

Receipts:

Premiums written (net).....	\$439, 887. 51
Earnings on assets (received and accrued).....	34, 288. 59
Reimbursement of compensation.....	3, 195. 10
Total.....	477, 371. 20

Disbursements:

Losses paid on injuries occurring during year.....	165, 205. 38
Administrative expense.....	30, 795. 68
Proportionate expense, State accident commission.....	4, 944. 30
Reinsurance premiums.....	3, 349. 04
Return premium.....	776. 18
Attorneys' and other fees.....	16. 80
Transferred to reserves and surplus.....	272, 283. 82
Total.....	477, 371. 20

Assets: <sup>1</sup>

November 1, 1928.....	882, 762. 33
October 31, 1929.....	918, 523. 54
Increase.....	35, 761. 21

Losses paid from reserves during current year on injuries occurring November 1, 1914, to October 31, 1928.....	206, 356. 52
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<sup>1</sup> Includes notes receivable, accrued interest, and policyholders' accounts.



## South Dakota

THE twelfth annual report of the South Dakota industrial commissioner covers the experience under the workmen's compensation act of the State for 12 months ending June 30, 1929. The principal features are presented as follows:

TABLE 1.—EXPERIENCE UNDER WORKMEN'S COMPENSATION ACT, FISCAL YEAR ENDING JUNE 30, 1929

Item	Year ending June 30, 1929	Per cent of change as compared with pre- vious 12 months
Fatal accidents reported.....	18	-18.2
Nonfatal accidents reported.....	5,500	+1.7
Disputed cases heard.....	9	-10
Disputed claims allowed.....	6	
Disputed claims denied.....	3	
Benefits:		
Amount of compensation payments.....	\$185,979.28	-8.2
Reported medical and hospital relief paid.....	\$93,769.17	-6.8
Administrative expense, office of industrial commissioner.....	\$4,854.84	
Administrative cost per accident reported.....	\$0.88	-1.7

<sup>1</sup> Rent not included; quarters furnished by State.

The report includes a table showing the number of injuries in each group of workers, under the special classification used by the commissioners' office, and giving the average daily wages for each group. This table is presented as Table 2.

TABLE 2.—NUMBER OF COMPENSABLE INJURIES AND AVERAGE DAILY WAGES, YEAR ENDING JUNE 30, 1929, BY OCCUPATION

Occupation	Num- ber of acci- dents	Daily wages	Occupation	Num- ber of acci- dents	Daily wages
Laborers.....	1,286	\$4.32	Produce plants.....	72	\$3.37
Utilities.....	212	4.77	Machinists.....	63	4.93
Garage.....	160	4.43	Waitresses.....	31	2.23
Mechanics.....	308	5.06	Dishwashers.....	29	2.51
Meat packing.....	336	3.77	Salesmen.....	67	4.64
Janitors.....	43	3.92	Elevator operators (grain).....	28	5.30
Miners.....	485	4.73	Farm laborers.....	36	3.44
Farmers.....	174	3.23	Warehousemen.....	46	3.70
Threshing.....	125	4.45	Policemen.....	16	4.49
Drivers, teamsters, etc.....	344	4.08	Engineers (stationary).....	24	5.63
Railroad.....	77	4.52	Cement workers.....	17	5.06
Carpenters.....	155	6.36	Firemen (volunteer).....	9	4.61
Clerks and bookkeepers.....	129	3.25	Electricians.....	12	5.45
Lumbering.....	107	3.36	Grain buyers.....	3	4.32
Highway bridge and maintenance and bridge construction.....	68	4.54	Gas station attendants.....	23	5.05
Ice men.....	64	4.27	Well drillers and diggers.....	8	4.65
Plumbers.....	37	6.73	Welders.....	10	4.56
Creameries.....	82	4.16	Blacksmiths.....	21	5.65
Implement dealers.....	43	4.52	Biscuit makers.....	24	3.00
Printers, linotype operators.....	60	5.00	Tinners.....	6	5.20
Cooks, chefs.....	54	4.11	Painters.....	26	5.00
Butchers.....	57	5.01	Bricklayers.....	17	9.82
Telephone.....	49	4.49	Tractor operators.....	12	4.31
Bakers.....	33	4.25	Teachers.....	14	7.16
Stone and quarry workers.....	62	5.23	Dry cleaners.....	3	4.25
			Miscellaneous.....	351	4.72

### Compensable Cases of Occupational Disease in Illinois

**U**NDER the occupational disease act of Illinois, as amended in 1923, disability or death caused by an occupational disease arising out of and in the course of employment in certain specified occupations is considered as an accidental injury. The specified occupations are those involving the use or handling of certain compounds of lead or arsenic, or other poisonous chemical, mineral, or other substances in harmful quantities or under harmful conditions, the manufacture of brass, or the smelting of lead or zinc. Other diseases or infections are compensable only if proved to be accidental injuries or the result of such injuries.

Compensable occupational disease cases are reported to the industrial commission in the same manner as accidents, so that all cases involving more than seven days' disability are reported. Since April, 1928, the commission has also requested additional information on all cases indicating disease or industrial poisoning. These data, in summary form, are given in the February and March issues of the Labor Bulletin, the official publication of the Illinois Department of Labor.

Up to the end of January, 1930, preliminary reports had been received in 439 cases, the great majority of which have been supplemented by additional information.

The following table shows a summary of the nature of the disease in the 439 cases, by industry group. The grouping of the industries has been changed slightly from that published in the Labor Bulletin, so as to conform to the standard classification of the International Association of Industrial Accident Boards and Commissions.

COMPENSABLE OCCUPATIONAL DISEASE CASES REPORTED IN ILLINOIS, APRIL 1, 1928, TO JANUARY 31, 1930, BY NATURE AND INDUSTRY

Nature of disease	Clerical and professional service	Construction	Manufacturing	Trade	Transportation and public utilities	All industries
Benzol poisoning				1		1
Carbon monoxide poisoning		1	6	9	2	18
Chlorine gas poisoning			1			1
Gas poisoning, not classified			1			1
Hydrogen sulphide poisoning			1			1
Illuminating gas poisoning			1		1	2
Inflammation of lining of nose		1	2			3
Lead poisoning		6	302	2	1	311
Lung affections, not classified			2			2
Methyl chloride poisoning		1				1
Naphtha poisoning				1		1
Skin affections, not classified	5	9	60	7	5	86
Tuberculosis			1			1
Well's disease		1				1
Not classified		1	7	1		9
Total	5	20	384	21	9	439

The occupational disease act covers only a small number of occupations, and the main hazards to the workers in these are from the lead compounds. Consequently there is a relatively high proportion of lead poisoning in the reported diseases—70.8 per cent—which would be misleading if compared with figures for a State where all

occupational diseases are included. Skin diseases come next, with 19.6 per cent, while carbon monoxide poisoning ranks third, with 4.1 per cent.

A sex division of the affected workers shows that a proportionately larger number of cases occurred among male workers, based on a rough estimate of four male workers employed for every female worker, as 92.3 per cent of the cases were males. Comparatively few of these were minors, and the largest number of cases was in the 5-year group between 25 and 29 years of age. In the case of the females, the largest number of cases occurred in the age groups of 18 to 20 years and 35 to 39 years.

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### Change in Administering Workmen's Compensation Act in New York

**T**HE policy of closing minor disability compensation claims without formal calendar hearings was placed in operation on March 17 by the New York State Department of Labor.

Up to that time the claim procedure of New York had differed from that of other States in requiring a formal hearing by a referee in each compensable accident case, whether covered by a mutual agreement and already settled, or involving a claim. It was thought that such a system, requiring the attendance of the injured worker so that the exact nature of the injury and the extent of disability could be seen, would assure payment of the full compensation or medical benefit guaranteed under the act.

The procedure has been responsible for considerable delay in receipt of the first compensation payment, unless advance payments were made by carriers. It has also entailed considerable expense and waste of time by injured workers and their witnesses in attending hearings when the case had previously been adjusted through mutual agreement, or when the hearing was postponed. Carriers and self-insurers had repeatedly complained of the extra expense and work involved through formal hearings of uncontested compensation cases.

Under the new procedure, all cases of temporary disability not exceeding four weeks in duration and in which the employers or carriers have made full payments, and all cases involving less than seven days' disability, may be closed without a formal hearing after an examination of the records and due notice to the interested parties.

Certain regulations were included by the industrial board to protect the interests of the claimants. The new rules require that no case shall be closed without hearing except by a referee, and that cases involving permanent disability, facial disfigurement, hernia, or fractures of any kind, or cases involving disability of more than four weeks' duration, can not be closed without a hearing.

Aside from the saving in wages and time to claimants in cases where compensation has been paid in full, or where less than seven days disability is involved and the injury is consequently not compensable, and the saving in time to carriers or representatives of self-insurers, the change should effectively reduce the size of the



trial calendar and permit the referees to devote longer time to the more important and disputed cases.

Complete records of the cases closed under the new system will be turned over to the industrial board on July 1, to determine if the method is to be maintained over an extended period. All carriers and self-insurers have been advised to furnish promptly all medical reports and other data on the cases. It is pointed out that if the records are not complete it will be necessary to schedule even minor cases for hearings as before.

# HEALTH INSURANCE

## Increased Claims upon English Health Insurance Fund

THE results of an investigation into the sickness and disablement experience of a group of approved societies, made by the Government actuary and covering the period 1921 to 1927, have recently been made public and have aroused much discussion. The Lancet (London), in its issue for May 3, 1930, gives a brief summary of the findings. The investigation dealt with a sample of the insured population determined by taking a group of approved societies with a membership, at the last valuation period, of 219,000 men, 172,000 unmarried women, and 64,000 married women. In this study the term "married women" is used to denote those whose husbands are living, widows being grouped with spinsters as unmarried women.

### Upward Movement of Claims

THE following table shows the percentage that the weeks of sickness and disablement for which benefits were actually claimed formed of the expectation of such periods on which the present valuation of the societies is based:

TABLE 1.—PERCENTAGE WEEKS OF SICKNESS AND DISABLEMENT FORMED OF EXPECTATION

Year	Men		Unmarried women		Married women	
	Sickness	Disablement	Sickness	Disablement	Sickness	Disablement
1921.....	76	54	73	60	63	66
1922.....	89	65	88	67	82	73
1923.....	86	72	91	77	92	90
1924.....	97	81	105	86	110	104
1925.....	98	83	112	99	121	125
1926.....	108	93	112	111	124	146
1927.....	107	100	117	119	130	171

It will be seen that in respect of each of the three classes of insured persons the claims for both sickness benefit and disablement benefit have been rising continuously during the seven years. Comparing 1927 with 1921, the claims for sickness benefit have risen in the case of men by 41, of unmarried women by 60, and of married women by 106 per cent. For disablement benefit the corresponding increments are 85, 100, and 159 per cent. In the early years of the period the moderation of the claims was, says the actuary, a factor of substantial importance in the production of valuation surpluses. Since 1926 in the case of men, and 1924 in the case of women, the position in this respect has undergone a serious change.

## Number and Duration of Claims

AN ANALYSIS of the claims with respect to their number and duration shows for the three classes the following results:

TABLE 2.—ANALYSIS OF CLAIMS WITH RESPECT TO NUMBER AND DURATION

*Sickness benefit*

Year	Men		Unmarried women		Married women	
	Number claiming per 100 members	Average duration of claims in year (weeks)	Number claiming per 100 members	Average duration of claims in year (weeks)	Number claiming per 100 members	Average duration of claims in year (weeks)
1921	14	4.8	12	6.1	19	7.1
1922	18	4.4	15	5.8	25	7.0
1923	17	4.5	15	6.0	27	7.2
1924	20	4.3	19	5.7	34	6.9
1925	21	4.1	20	5.5	37	7.0
1926	20	4.8	19	5.9	36	7.5
1927	23	4.2	21	5.6	38	7.3

*Disablement benefit*

1921	1.5	25.4	1.9	28.7	3.3	23.4
1922	1.8	25.2	2.2	28.0	3.6	23.9
1923	2.0	26.3	2.6	28.2	4.5	23.4
1924	2.2	26.5	2.9	28.1	5.4	22.7
1925	2.2	27.1	3.3	28.3	6.9	21.4
1926	2.5	27.3	3.7	28.9	8.1	21.6
1927	2.6	27.7	3.9	29.1	9.2	22.2

As far as sickness benefit is concerned, the number in each hundred members making claims has increased considerably during the period, the percentage of increase being for men 64, for unmarried women 75, and for married women 100. On the whole, this increase has been fairly continuous, though 1926 saw a slight decrease in each class of claimants. The duration of the benefit period, on the contrary, shows an actual decrease for men and unmarried women, with an almost negligible increase for married women. This tendency, according to the report, is continuing.

The claims for sickness benefit in 1928, taken over the whole insured population of Great Britain, were about 91 per cent of the claims of 1927 in the case of men and 94 per cent in the case of women. On the other hand, the experience of 1929, as indicated by the first 39 weeks' payments of a number of societies covering nearly 50 per cent of the insured population, shows a serious rise, in the case of both men and women, over the corresponding period of 1928. Disablement benefit shows a further rise of a few points in the case of both sexes in 1928, and a slight increase in 1929 over the level reached in 1928. Taking both benefits together, it must be concluded that the conditions of 1927 have not subsequently been alleviated.

The sickness benefit may be paid for 26 weeks in a year, after which, if the insured person is still unable to work, disablement benefit is paid at a lower rate. The number of disablement claims has increased since 1921 in all three classes of claimants, but is markedly greater among married women than elsewhere. On the other hand, the duration of claims for disablement benefit has de-



creased among this last class, while increasing slightly among single women and to a greater degree among men.

A study of the age grouping of claimants showed that for both men and women the increase had been general throughout all age groups. The number of claims of very short duration, however, showed the greatest increase among the younger workers.

#### Significance of Increases

THE bearing of these increases upon the finances of the national health insurance scheme is a point which has roused much discussion. The scheme was inaugurated in 1912, and it was not until 1924 that the weeks of sickness benefit for any class of claimant reached the expectation on which its valuation was based. As a consequence, the scheme has piled up large reserve funds and there is absolutely no question of its stability for years to come. However, the contributions the plan calls for are based upon the expectation of a certain ratio between the amount paid in by contributors and the amounts paid out to beneficiaries. If the present excess of actual claims over the number anticipated is to continue, it will be necessary to lessen the benefits or increase the contributions in order to maintain the scheme on an actuarial basis.

Of even more importance is the reason for the increased number of claims for benefit. Is the national health really declining, or is the practice of malingering spreading among the people? Malingering is the easiest explanation to adopt, but seems hardly adequate. It involves widespread fraud among both the recipients of benefit and the doctors who certify to their inability to work, and there is no evidence to establish such a marked growth of dishonesty among both the workers and the medical profession. Also, the temptation is small. One member of Parliament presented the situation concisely:

An unemployed man with a dependent wife and four children and drawing unemployment benefit will receive 34s. [\$8.27] a week. He falls ill, and then goes on the national health insurance, and with his wife and four children he gets 15s. [\$3.65] a week for 26 weeks, and then it drops down to 7s. 6d. [\$1.83]. That is not much temptation for a man to mangle. (Parliamentary Debates, April 29, p. 147.)

The London Economist (May 3, 1930, p. 984), thus sums up the causes generally assigned for the increased demands upon the insurance fund:

It is, however, extremely unlikely that increased malingering has very much to do with the rapid growth in claims. A contributory cause of the growth may be the increasing recognition of the advisability of seeking medical advice in the early stages of illness. But undoubtedly one of the principal causes is to be found in the severe unemployment of the last few years, for unemployment is bound to react on the proportion of health insurance claims in a number of different ways. In the first place, it undermines the physique of its victims, so that, in spite of the favorable reports of the Registrar-General, whose statistics do not take account of sickness that is neither fatal nor notifiable, there may well have been a growing amount of minor illness in the last few years; in the second place, if an insured person has nothing to do, he is likely to give in to an indisposition which he would try to ignore if he had a job to keep, and lastly the poverty resulting from unemployment drives insured people to avail themselves of every opportunity to claim benefits to which they are entitled. Furthermore, the longer the scheme has been in force, the more people realize and avail themselves of the full extent of their rights under it.

In the parliamentary debate upon the subject, another reason was assigned by a member who himself belonged to the working classes, who related it to the reduction in working hours and the changes which had accompanied this movement.

There has been concurrently with that a complete change in the attitude of the employer towards the worker when he is ill in the course of his employment. There is not time now for a man to have a sick headache in the shop or a factory. He must either be well enough to work all the time or sufficiently ill to go off and declare on the funds of his society. Rationalization and speeding-up, in my view, is one of the greatest causes of the increase in the claims on approved societies' funds. (Parliamentary Debates, April 29, p. 102.)

The Economist presents a table showing the number entitled to benefits, the receipts, accumulated funds, amount spent in benefits, and cost of administration of the national health insurance scheme from 1921 to 1928, inclusive.

TABLE 3.—STATISTICS OF THE NATIONAL HEALTH INSURANCE SCHEME, 1921 TO 1928

Year	Estimated number entitled to benefits	Receipts	Accumulated funds at end of year	Total benefits	Total cost of administration
1921	15,100,000	£40,600,000	£92,200,000	£24,500,000	£5,400,000
1922	15,100,000	37,500,000	100,400,000	24,800,000	4,900,000
1923	15,200,000	37,900,000	109,500,000	24,500,000	4,900,000
1924	15,600,000	39,700,000	116,600,000	26,100,000	4,800,000
1925	15,800,000	41,400,000	126,600,000	27,500,000	4,900,000
1926	16,300,000	37,400,000	126,600,000	32,000,000	5,100,000
1927	16,500,000	39,500,000	125,100,000	35,700,000	5,200,000
1928	16,400,000	38,800,000	126,400,000	32,300,000	5,300,000

This suggests that while there is no cause for anxiety for a long time to come there are taking place developments as to whose causes the Nation must be fully informed. Mr. Greenwood announced last Tuesday that two investigations are to be undertaken: One, which is already under way, is to make available information as to the steps which are taken by approved societies to check the genuineness of the cases in receipt of benefit, and the other has as its object the obtaining of more precise knowledge as to the standard applied in interpreting the phrase "incapacity for work." The results of these inquiries, and of the further investigation which is being undertaken by the national health insurance joint committee, should be a great aid in interpreting the position.

### Sickness Insurance for Wage Earners in the Netherlands

AS EARLY as June 5, 1913, the Netherlands enacted a law providing for sickness insurance for wage earners. For various reasons, however, this law was not put into operation, and it was amended practically every year beginning with 1915. Finally the amended act was officially published on June 24, 1929, and the decree for its enforcement was published on January 17, 1930.<sup>1</sup>

#### Scope of Law

THE act covers all wage earners "employed by an enterprise," with the following exceptions: (a) Persons not regularly working

<sup>1</sup> This review is based upon the report of Carol H. Foster, United States Consul at Rotterdam dated Jan. 30, 1930.

for their living; (b) apprentices serving without pay; (c) persons whose fixed wage or earnings exceed 3,000 florins (\$1,206) per annum; (d) sailors on seagoing vessels, already covered by maritime insurance laws;<sup>2</sup> (e) persons in military service; and (f) persons considered by the act as employers.

In connection with the accident insurance act, the Dutch courts have held that domestic servants, seamstresses, chauffeurs, and other workers employed by private persons, may not be classified as wage earners "employed by an enterprise," for an enterprise, according to the prevailing legal definition, is conducted for the purpose of making profit. Therefore, the above classes of workers, when employed by private persons, will probably not be considered "wage earners" under the sickness insurance act. The Minister of Labor is given authority to include, under the sickness insurance act, casual workers, defined as persons who as a rule do not work longer than two days per week for the same employer.

All wage earners are to be insured, with the exception of those employed by enterprises already having some form of sick benefit, provided such exemption is for the workers' interest. The miners, for example, who already have a scheme of sickness insurance, will probably avail themselves of this exemption. Railroad employees, whose contract provides for sick benefits, are not covered by this act, provided the terms of the contract have been approved by the minister in charge of the railroad affairs; nor are persons employed by public institutions, if they are already covered by a sickness benefit scheme approved by the Government.

One of the peculiarities of the scheme is the exemption on account of conscientious objections. An employer who has conscientious objections against the sickness benefit insurance may be exempted therefrom. However, in order to prevent such an employer from deriving a financial benefit from the exemption, the amount of his income tax will be increased by the amount of contributions which would have otherwise been payable by him. A wage earner working for an employer who has conscientious objections against the insurance must pay his share of the contribution direct to the Government.

A wage earner who has conscientious objections may also be exempted from the insurance, in which case he must observe the regulations which may be issued in this connection by the Minister of Labor. In such cases, however, the obligation of the employer to pay his share of the contribution is not waived.

#### Insurance Carriers

THE insurance risk is carried either by the sick funds of the State labor boards (*raden van arbeid*) or by authorized insurance associations (*Bedrijfsvereenigen*).

*Labor boards.*—The labor boards were established in accordance with the act of June 5, 1913, as amended by the act of December 24, 1927, for the purpose of carrying out the provisions of the various social insurance acts.<sup>3</sup> The boards are already in charge of the compulsory invalidity, old-age, and accident insurance.

<sup>2</sup> Persons employed on coastwise fishing vessels are subject to the act.

<sup>3</sup> See *Labor Review*, December, 1929, pp. 73-79.



Each labor board is composed of a president (appointed by the Queen), and a number of members and substitute members, representing the employers and employees, who are appointed by the Minister of Labor upon recommendation of the unions of employers and workers. The number of members of each labor board depends upon the importance of the board, but there must always be an equal number of employers' and workers' representatives. For instance, the labor board at Rotterdam is composed of 14 members and 14 substitutes. One of the employers' members and one of the employees' members are charged with carrying on the daily affairs of the board, while the complete board meets only as circumstances require. The members and substitutes are appointed for a period of six years.

There are at present 34 labor boards in operation in the Netherlands, located in various industrial centers.

*Insurance associations.*—If a wage earner is not insured against sickness with a labor board, he must be insured with an association. The contributions charged by the associations may not be higher than those charged by the labor boards, nor may the benefits paid by the former be less favorable to the insured than those paid by the labor boards.

The Minister of Labor recognizes as an association: (a) An association established by one or more federations of employers' unions together with one or more federations of labor unions; (b) an association established by one or more unions of employers together with one or more unions of workers, provided such unions belong to the federation mentioned under (a); (c) an association established by employers before July 1, 1929, whose articles of incorporation provide that at least 50 per cent of the board of directors shall consist of representatives of labor unions designated by the Minister of Labor; (d) an association established before July 1, 1929, by one or more unions of employers together with one or more unions of workers, which do not belong to a federation. Associations of the last two classes are approved each time for a period of five years.

An association must meet the following requirements: (1) Its object must be the carrying out of the compulsory sickness insurance; (2) its benefits must be as favorable as those stipulated in the act; (3) it must insure collectively all the wage earners employed by an employer affiliated to the association; (4) it must give persons whose compulsory insurance has expired the privilege of taking out voluntary insurance; (5) the amount of wages insured by it must amount to at least 2,500,000 florins (\$1,005,000) per annum; (6) it must not operate for profit; (7) its articles of association must provide for equal representation of workers and employers in the management and for an equal number of votes of both parties in its general meetings. Each association must furnish a bond insuring the satisfactory fulfillment of its obligations and must comply with certain requirements in connection with the keeping of books and records, reserve fund, annual report, etc.

The supervision over the associations is intrusted by the Minister of Labor to a board of supervision. The act requires the associations to submit their annual reports to this board and to furnish all desired information.

*Admission to insurance.*—An employer who desires to have his workers insured with a labor board must make application to the board for each individual worker. He receives a dated receipt for each application.

An employer who is a member of an association does not have to make application for each individual worker, since his employees are insured collectively and if sick receive their benefit direct from the association.

In case an employer is domiciled abroad, his local manager or representative charged with the direction of the enterprise is considered as the employer.

*Voluntary insurance.*—The act also provides for voluntary insurance in order to enable persons whose obligatory insurance has expired to continue their insurance voluntarily. The labor boards and associations are obliged to accept these voluntary insurance contracts.

### Contributions

THE contributions to be charged by each labor board are fixed by the Minister of Labor, subject to revision once every five years, and are based upon the wages. The contributions charged by the associations are fixed by the associations but may not be higher than those charged by the labor boards.

Contributions are borne equally by the employer and the worker, the employer paying the whole amount and then deducting 50 per cent from the wages. The worker may bear 100 per cent of the contribution if he so desires.

If a worker receives his wages entirely in kind, the entire contribution is made by the employer.

For insured wage earners employed in industries involving more than a normal sick risk, a higher contribution may be charged, but in such cases the difference must be paid entirely by the employer.

The contribution is made for the days during which sickness benefit is received.

Contributions to all labor boards are set at 2.3 per cent of the wages, but the maximum wage or salary for which contribution is payable is 8 florins (\$3.22) per day. Of this contribution, 1.15 per cent is paid by the employer and 1.15 per cent by the wage earner, except in cases where the latter receives his wages in kind when the entire contribution is made by the employer.

For wage earners in the following industries and trades a contribution of 3.4 per cent is fixed: Cement works; bottle and other glass factories (glass blowers only), stone industry (stone cutters and sawyers); chemical plants, candle factories, fertilizer plants and fertilizer trade, oil and grease plants and oil and grease trade, fur industry, coke ovens, plants manufacturing or repairing steam fittings, galvanizing establishments, brass foundries, enameling furnaces, establishments doing nickel and tin plating and countersinking, metal grinding and polishing plants, iron foundries, zinc smelters, sugar refineries, and plants manufacturing window and plate glass; gunpowder, nitroglycerine, and other explosives; fireworks; paint, lacquer, and varnish; glue and gelatine; feathers and kapok; bolts, nails, and nuts; stoves, iron furniture and articles made from sheet iron or zinc.

Of the contribution, 2.25 per cent is paid by the employer and 1.15 per cent by the worker.

For insured wage earners employed in mining, the construction of mine shafts and mine galleries, or in blast furnaces, a contribution of 4.9 per cent of wages is set. The contribution for these workers is paid at the rate of 3.75 per cent by the employer and 1.15 per cent by the wage earner.

An insured wage earner employed in an enterprise which carries on various branches of industry is regarded as employed in that branch the pay roll of which is the largest.

The associations report that it is impossible to fix their contributions definitely until they have been in operation for at least a year, but it is expected that their rates will be considerably lower than those of the labor boards.

### Benefits

WAGE earners insured under the act, who are unable to perform their work on account of sickness, are entitled to benefits, subject to various conditions set forth in the act. Married women are entitled to sick benefits, under the act, during pregnancy and confinement.

Sickness benefits are not payable if the disability results from an industrial accident or occupational disease which entitles to workmen's compensation benefits; nor if the insured is not a member of a sick fund approved under the sick fund act <sup>4</sup> and furnishing medical treatment; nor if the sickness is willfully caused; nor if the insured is confined in a prison, labor colony, reformatory, or other penal institution.

In addition to the above, the act enumerates the following cases in which benefit may be partly or wholly refused: (a) If the disability existed at the time insurance was taken out; (b) if pregnancy occurs before or confinement within six months after the commencement of insurance;<sup>5</sup> (c) if the sickness was caused by the immorality of the insured, provided it is known that the insured leads an immoral life; (d) if the insured does not call medical aid within a reasonable period of time and does not take medical treatment throughout the duration of his sickness, or if he does not follow the advice of the attending physician; (e) if by his actions he delays or prevents his recovery; (f) if he refuses to furnish information or to undergo the necessary medical examination; (g) if he does not comply with the regulations.

In case the insured is addicted to drink, the sick benefit may be paid in another form than cash.

An insured who is repeatedly sick and has received a total of 180 days of sick benefit during a period of 12 months on account of the same sickness, shall during the following 12 months receive no benefit in excess of 90 days for the same cause of sickness.

*Amount of benefit.*—The sick benefit normally amounts to 80 per cent of the daily wage of the insured, but no benefit is paid on any amount in excess of 8 florins (\$3.22) per day, so that the maximum normal benefit amounts to 80 per cent of 8 florins, or 6.40 florins (\$2.57) per day.

<sup>4</sup> The sick fund act referred to has not yet been approved and it is not anticipated that this act will be passed before the sickness insurance goes into force. Therefore, the obligation to be a member of a sick fund will not commence until the sick fund act is passed.

<sup>5</sup> Unmarried women receive no sick benefit during pregnancy or confinement.



The benefit is paid for each day (except Sunday) that the disability for work lasts, beginning the third day after the onset of disability and continuing up to a maximum of six months.

If the physician in charge of a case is of the opinion that it is in the interest of the insured partially to resume his work for a remuneration of at least 50 per cent of his regular wage, the sick benefit may be reduced to 50 per cent. If the part wage exceeds 50 per cent, the benefit may be reduced to 50 per cent. If the part wage exceeds 50 per cent, the benefit is reduced accordingly, so that the total will not exceed 100 per cent of the sick benefit.

The act requires that the insured workers who are sick, but whose wages continue, or who receive other benefits for voluntary insurance, etc., must notify the labor board or association of these circumstances before the first benefit under this act is paid. In such cases the benefit may not exceed the difference between the regular wages and the total amount received outside the act.

A pregnant married woman insured under the act is entitled to a special benefit amounting to the full daily wages and payable during the last six weeks of pregnancy. This benefit commences on the day she submits a statement from a physician or a midwife to the effect that the confinement will probably take place within a period of six weeks, and is paid regardless of the ability of the insured to perform work. It therefore enables her to stay at home for a period of six weeks without loss of wages. (If at any prior time during the pregnancy she falls ill, she is entitled to the normal benefit of 80 per cent of wages.) Beginning with the time of confinement the insured becomes entitled to another benefit also amounting to full wages and payable for six weeks. If, however, the disability for work lasts beyond that period, the benefits may be continued, subject to a maximum of six months.

*Increase of benefits.*—The Minister of Labor is empowered by the law to authorize any labor board to increase the benefits, up to a maximum of 90 per cent of the daily wage. (No reduction of benefits may be made.) Likewise, authority may be given to begin payment of benefits at once, without observing the waiting period of two days; to increase the maximum period of benefit to 12 months; and to pay benefit for Sunday, provided the total number of days for which the benefit is paid does not exceed six days per week.

#### Funds Established under the Act

THE act provides for the establishment of a "prophylactic fund," formed from contributions from the labor boards and the associations. The amount of annual contribution is fixed by the Minister of Labor but shall not exceed 0.025 per cent borne equally by employer and worker, of the insured wages for the past calendar year. The fund will be used for the establishment of hospitals, institutions, etc.

A fund for medical treatment is also provided for. The act requires that the labor boards and associations shall pay into this fund 0.4 per cent of the total insured wages for the past calendar year, the money being collected from the employers, who are prohibited from charging any of it to the workers. It is estimated that the total annual contribution to the fund for medical treatment will amount to 6,000,000 florins (\$2,412,000).

### Date of Effect of the Act

THE sections of the act providing the establishment of the associations went into effect on August 1, 1929, and the sections of the act providing for compulsory sickness insurance went into effect on March 1, 1930.

### Expiration of Insurance with Private Companies

THE act provides that sickness insurance contracts with private companies by the wage earners prior to the date on which the act takes effect shall automatically expire on that date.

### Penalties

AN EMPLOYER who does not furnish the information called for in the act, who fails to make the necessary application to have his workers admitted to the insurance under the act, or who charges more than 50 per cent of his contribution to the workers, may be fined not to exceed 100 florins (\$40.20) or imprisoned not to exceed one month.

Similar penalties may be imposed upon an insured wage earner who fails to report any wages or other compensation received while drawing sick benefit.

### Progress Under the Act

ACCORDING to the information given out by the Department of Labor, Commerce, and Industry, at The Hague, 25 associations have been recognized for the following fields: Building industry, manufacture of central heating apparatus, manufacture of cigars, consumers' cooperative movement, clothing industry, leather industry, metal industry, plumbing industry, printing industry, inland shipping, manufacture of strawboard, sugar industry, and textile industry.

Most of the more important employers are taking out their insurance with the associations, expecting that the contributions will be lower than those charged by the Government labor boards.

Up to this time no regulations have been issued by the Minister of Labor bringing casual workers under the act and it is believed that this group of workers will not be admitted to the insurance in the near future.

Conferences are taking place between the Minister of Labor, the federation of labor boards, and the associations with a view to securing close cooperation and insuring the smooth operation of the new act. Discussions are also being held between the Minister of Labor and the organizations instituted to carry out the act as to the best method of control of the sick wage earners covered by the act.

# OLD-AGE PENSIONS AND RETIREMENT

## Enactment of Old-Age Assistance Law in Massachusetts

ON MAY 28, 1930, Governor Allen signed the old-age assistance act (ch. 402) which had passed both houses of the legislature by large majorities, thus making Massachusetts the twelfth State to establish the so-called pension system of care for the indigent aged. The law is to become operative July 1, 1931. The age of eligibility is set at 70 years. The act is to be administered by the State Welfare Department, acting through the local welfare boards. The amount of assistance to be given is left indeterminate, but it is specified that it shall be sufficient to provide "suitable and dignified care," due regard being had, when awarding it, to the circumstances and methods of living of the beneficiaries. Wherever practicable, the assistance is to be given in the pensioner's own home, or in lodgings, or in a boarding house. If the beneficiary has a legal settlement, the locality of his settlement is to pay two-thirds and the State one-third of the amount awarded; if he has no settlement, the State is to bear the whole cost.<sup>1</sup>

## Operation of the New York State Retirement System, 1928-29

THE New York State retirement system is so planned that employees of local administrative units, as well as of the State itself, may become members, provided the local unit employing them agrees to comply with the terms of the system and to pay a proportionate share of the cost. This provision has been increasingly utilized. The ninth annual report of the comptroller of the State of New York, discussing the condition of the system on June 30, 1929, shows that at that date the membership and the pay roll represented were as follows:

	Number	Pay roll		Number	Pay roll
State employees.....	22, 145	\$39, 705, 817	Village employees.....	242	\$534, 069
County employees.....	4, 459	9, 418, 697	Miscellaneous employees.....	151	338, 334
City employees.....	7, 561	15, 018, 498			
Town employees.....	172	487, 829	Total.....	34, 730	65, 503, 244

It will be noticed that the State employees form less than two-thirds of both the membership and the pay roll.

At the same date there were 1,466 beneficiaries of the system, who were receiving allowances amounting to \$902,249 a year. The

<sup>1</sup> An analysis of this law will appear in the August issue of the Labor Review.



direct contributions of the members amounted during the year to \$3,573,075, the public appropriation, based on the pay roll as of June 30, 1929, was \$3,994,385, and at the close of the year the system had assets, in cash and securities, of \$26,083,610.

The system provides for normal service retirement, discontinued service retirement (which occurs when a worker who has been employed for a prescribed minimum length of time is discharged without fault on his part, because of reorganization or some other cause), and ordinary and accidental disability benefit, and in addition makes some provision for dependents of members dying as a result of injuries or exposure incurred in the discharge of duty. Of the 1,466 beneficiaries who on June 30, 1929, were drawing allowances, 55 were widows or other dependents of deceased members, ordinary and discontinued service retirement accounted for 1,318, and ordinary and accidental disability retirement for 93.

The system permits retirement at 60, regardless of length of service, and requires it at a later age. The compulsory age was at first set at 70, but the protest against this was so strong that the limit was raised to 80, with a progressive reduction which would bring it down to 70 in 1936. The age of beneficiaries at retirement is not given, but data concerning the age of employees in active service show some significant features. As of June 30, the employees were classed as follows:

NUMBER OF EMPLOYEES IN STATE RETIREMENT FUND JUNE 30, 1929

Class of employees	New entrants	Present members	Total
Clerical and administrative.....	10,782	6,243	17,025
Laborers.....	3,530	2,158	5,688
Institutional employees.....	8,786	1,919	10,705
Firemen.....	108	196	304
Policemen.....	790	218	1,008
Total.....	23,996	10,734	34,730

A "new entrant" is one who has no credit for service rendered before entering the retirement system, while a "present member" is one with such credit. The present members are, for the most part, those who were in the State service when the system was adopted in 1920, or in some other public service in which they have been brought under the State retirement plan with credit for the length of time served, while the new entrants have either entered the public service since the adoption of the system or have been brought under its terms without any credit for previous service. In the case of policemen and firemen, the nature of their duties makes it necessary that most of them should be men in full strength and vigor, so that early retirement is inevitable, and usually special provisions are made to meet this need. Omitting these two, the proportion in each of the other groups aged 60 and over was as follows:

NUMBER AND PER CENT OF EMPLOYEES AGED 60 AND OVER IN SERVICE JUNE 30, 1929

Class of employee	New entrants		Present members		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Clerical and administrative.....	427	3.96	1,309	20.97	1,736	10.20
Laborers.....	236	6.69	671	31.09	907	15.95
Institutional employees.....	175	1.99	332	17.30	507	4.74
Total.....	838	3.63	2,312	22.40	3,150	9.43

### Widows', Orphans', and Old-Age Pensions in Scotland

THE first annual report of the Scottish Department of Health<sup>1</sup> contains a discussion of the work done under the widows', orphans', and old-age contributory scheme in Scotland during the year 1929. At the close of the year 126,452 persons were receiving pensions or allowances under the contributory scheme, and 62,952 others, aged 70 and over, were receiving old-age pensions which, under the conditions set up by the contributory scheme, were payable without conditions as to means. Under the noncontributory acts, 89,956 persons aged 70 and over were receiving old-age pensions. As the contributory has superseded the noncontributory plan, this is a diminishing group, but it is expected that the changes made during 1929 in the contributory act (see Labor Review, February, 1930, p. 46), will increase substantially the number of beneficiaries under its terms during the current year. The number of pensions and allowances which on December 31, 1928 and 1929, were being paid either under the contributory pensions act or in virtue of its terms were as follows:

	1928	1929
Widows' pensions.....	25,664	30,238
Children's allowances.....	33,680	35,190
Orphans' pensions.....	2,472	2,533
65-70 old-age pensions.....	53,778	58,491
Total.....	115,594	126,452
Over-70 pensions, payable without conditions as to means.....	57,791	62,952
Grand total.....	173,385	189,404

<sup>1</sup> Scotland. Department of Health for Scotland. First annual report, 1929. Edinburgh, 1930. (Cmd. 3529.)

From January 4, 1926 (when the contributory pensions act came into operation), to December 31, 1929, the total receipts from contributions were £9,156,679 (\$44,565,557) and from transfers from the treasury pensions account, £642,000 (\$3,124,614), making a total of £9,798,679 (\$47,690,171). Pension payments to the amount of £6,770,251 (\$32,950,812) had been made, £1,025 (\$4,989) had been lost in irrecoverable overpayments, and the expenses of administration had been £414,850 (\$2,019,075). The largest part of the overpayments were claimed in good faith, the pensioners not understand-

ing that payments are made in advance, not in arrears, and consequently thinking themselves entitled to one payment which in fact was not due them.

From April 1 to December 31, 1929, the amount paid out in pensions was as follows:

Widows' pensions:		
Noncontributory .....	£309, 600	(\$1, 506, 823)
Contributory .....	541, 000	(2, 633, 047)
Orphans' pensions:		
Noncontributory .....	24, 600	(119, 728)
Contributory .....	14, 000	(68, 138)
Old-age pensions (at ages 65 to 70) .....	1, 130, 600	(5, 502, 630)
Total .....	2, 019, 800	(9, 830, 366)

Some portion of this amount was paid directly to local authorities. Under the Scottish law, when a pension award is retroactive in effect and a parish council has been giving poor relief during the period for which arrears of pension become due, the council may reclaim, in whole or in part, the amount spent in relief from the arrears of pension. Under this provision, £10,895 (\$53,026) was repaid to parish councils during 1929. Approximately £5,730 (\$27,888) was paid to parish councils for children boarded out at the charge of the council, and £1,573 (\$7,656) was paid to the educational department in respect of orphans' pensions for children placed in industrial schools.



## LABOR LAWS AND COURT DECISIONS

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### Advisory Opinion of Massachusetts Court on Antiunion Contract

**A** BILL (H. Doc. 299) was introduced in the early part of the 1930 legislative session of the State of Massachusetts which declared that contracts of employment whereby either party agrees not to become or remain a member of a labor union or an organization of employers are against public policy and therefore void. Under the Constitution of the State of Massachusetts the governor, with the advice of the counsel and legislature, is permitted to ask an opinion of the supreme court of the State in anticipation of probable legislative action on any bill. Under this provision the supreme court of the State was asked to furnish the legislature of the State an advisory opinion upon the bill then pending in the legislature. On April 15, 1930, the full bench of the State supreme court handed down an opinion declaring that the proposed statute was a violation of both the Federal Constitution and the Constitution of the State of Massachusetts.

The opinion of the court as printed in the Congressional Record of May 1, 1930 p. 8406) is here reproduced, since it reviews several outstanding opinions previously decided by the United States Supreme Court on the subject of employment contract agreements. The justices of the Massachusetts Supreme Judicial Court, after stating briefly the legislative order requesting an advisory opinion, declared that:

A contract similar to those described in the proposed bill was assailed and its validity was under consideration in *Hitchman Coal & Coke Co. v. Mitchell* (245 U. S. 229). It there was said, at pages 250, 251: "That the plaintiff was acting within its lawful rights in employing its men only upon terms of continuing non-membership in the United Mine Workers of America is not open to question. Plaintiff's repeated costly experiences of strikes and other interferences while attempting to 'run union' were a sufficient explanation of its resolve to run 'nonunion,' if any were needed. But neither explanation nor justification is needed. Whatever may be the advantages of 'collective bargaining,' it is not bargaining at all, in any just sense, unless it is voluntary on both sides. The same liberty which enables men to form unions, and through the union to enter into agreements with employers willing to agree, entitles other men to remain independent of the union and other employers to agree with them to employ no man who owes any allegiance or obligation to the union. In the latter case, as in the former, the parties are entitled to be protected by the law in the enjoyment of the benefits of any lawful agreement they may make. This court repeatedly has held that the employer is as free to make nonmembership in a union a condition of employment as the workingman is free to join the union, and that this is a part of the constitutional rights of personal liberty and private property, not to be taken away even by legislation, unless through some proper exercise of the paramount police power." It is not necessary to consider whether the extent of the "paramount police power" in this connection can extend beyond provisions to secure that such contracts be free from coercion, because it is plain that the proposed bill does not avoid insuperable difficulties now to be mentioned.

In *Adair v. United States* (208 U. S. 161), an act of Congress was attacked whereby a penalty was imposed upon an employer of labor for making a contract of the same general nature as those described in the proposed bill or for discharging an employee because of membership in a labor union, the acts thus denounced being declared misdemeanors. It was held in an exhaustive opinion that the act was violative of the provisions of the fifth amendment to the Federal Constitution forbidding Congress to enact any law depriving a person of liberty or property without due process of law. In *Coppage v. Kansas* (236 U. S. 1) the main point for consideration was the validity of a statute of Kansas declaring it a misdemeanor for an employer to make a contract indistinguishable in its essential features from those described in the proposed bill. It was held after elaborate discussion and review of decided cases that the statute was repugnant to the guaranties contained in the fourteenth amendment to the Constitution of the United States. It there was said at page 14: "The principle is fundamental and vital. Included in the right of personal liberty and the right of private property—partaking of the nature of each—is the right to make contracts for the acquisition of property. Chief among such contracts is that of personal employment, by which labor and other services are exchanged for money or other forms of property. If this right be struck down or arbitrarily interfered with, there is a substantial impairment of liberty in the long-established constitutional sense. The right is as essential to the laborer as to the capitalist, to the poor as to the rich; for the vast majority of persons have no other honest way to begin to acquire property save by working for money." The decision in the *Coppage* case but followed and reaffirmed *Adair v. United States* (208 U. S. 161). To the same general effect is the decision in *Adkins v. Children's Hospital* (261 U. S. 525, 545, 546). Those decisions, of course, are binding upon the several States as to the force and effect of the Federal Constitution touching a statute like that in the proposed bill.

The principles thus declared by the Supreme Court of the United States prevail in this Commonwealth. The provisions of articles 1, 10, and 12 of the declaration of rights of the constitution of this Commonwealth are as strong in protection of individual rights and freedom as those of the fifth and fourteenth amendments to the Constitution of the United States. It was said in *Commonwealth v. Perry* (155 Mass. 117, 121): "The right to acquire, possess, and protect property includes the right to make reasonable contracts, which shall be under the protection of the law." To the same general effect are *Opinion of the Justices* (208 Mass. 619); *Rice, Barton & Fales Machine & Iron Foundry Co. v. Willard* (242 Mass. 566, 572); *Moore Drop Forging Co. v. McCarthy* (243 Mass. 554); and *A. T. Stearns Lumber Co. v. Howlett* (260 Mass. 45, 60, 61). The *Adair* and *Coppage* cases have been recognized and followed in *Opinion of the Justices* (220 Mass. 627, 630); *Bogni v. Perotti* (224 Mass. 152, 155); and *Opinion of the Justices* (Mass. Adv. Sh. (1929) 907, 911). The views expressed in these several opinions and decisions, which need not be further amplified, are decisive of the question here propounded. There is a wide field for the valid regulation of freedom of contract in the exercise of the police power in the interests of the public health, the public safety, or the public morals, and in a certain restricted sense of the public welfare. A somewhat extended collection of references to such statutes and a review of relevant decisions were made in *Holcombe v. Creamer* (231 Mass. 99, 104-107). None of them go so far as to justify a statute like that in the proposed bill.

Guided by the decisions of binding authority already cited, we respectfully answer that in our opinion the provisions of the proposed bill, if enacted into law, would be in conflict with the Constitution of the United States and of this Commonwealth.

### New York Half-Holiday Law for Women

THE New York State Legislature at its 1930 session amended the State labor law by enacting chapters 867 and 868, the effective date of which was April 28, 1930. The two acts amend sections 172 and 181 of the New York labor law, by granting to female employees over 16 years of age, employed in factories and mercantile establishments, a half holiday in addition to the one day of rest each week.

The acts were adopted in order to permit a better enforcement of the overtime provisions allowed in certain cases under the State labor law. Under the amendments, while the overtime allowance of 78 hours per annum is still permitted, such overtime, however, will be legal only when employees have worked a 5-day week, of hours in accordance with the State law or a 5½ day week with a 4½ hour short day. No particular day of the week has been designated as the short day. As to the effect of the new provision, The Industrial Bulletin, published by the industrial commissioner of New York State, in the issue of May, 1930, says that "probably the majority of the factories in the State will not be adversely affected thereby as they have been for some years observing the regular Saturday half holiday. It is conceded that adjustment to this requirement will be more difficult, but not insurmountable, in the case of mercantile establishments."

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### Constitutionality of North Carolina Barbers' Act Upheld

THE Supreme Court of North Carolina has upheld the Superior Court of Cumberland County, N. C., in declaring the barbers' act (Pub. Laws, 1929, ch. 119) to be constitutional and within the police powers of the State. This was the decision in the case of *State v. Lockey* (152 S. E. 693), in which case it appears that C. P. Lockey was arrested and convicted for the violation of the barbers' act by shaving and cutting hair for various persons for pay, "without first having obtained a certificate of registration, either as a registered apprentice or a registered barber, issued by the State board of barber examiners."

Lockey had paid the annual tax of \$2 as required by the revenue act, but had failed to pay either the \$5 temporary fee or the \$3 annual fee as required by the barbers' act.

A fine of \$10 imposed upon Lockey by the recorder was affirmed by the Superior Court of Cumberland County and he appealed to the Supreme Court of North Carolina, contending that the general assembly had no authority to create an expense and arbitrarily and unreasonably classify the citizens of the State in this manner, and furthermore in taxing the apprentices the State had placed a tax upon "the hired man" or "daily worker" for exercising the right of working with his own hands for a living.

The North Carolina Supreme Court held that these contentions could not be maintained, as the act comes within the police powers of the State. The court cited numerous cases laying down the rule that a State, in the exercise of its police power has a right to require an examination and certificate as to the competency of persons exercising callings, whether skilled trades or professions, which affect the public and require skill and proficiency.

In the course of the opinion the court quoted Judge Cooley, who said that the police power of a State—

Embraces its whole system of internal regulation, by which the State seeks not only to preserve the public order and to prevent offenses against the State, but also to establish for the intercourse of citizens with citizens those rules of good manners and good neighborhood which are calculated to prevent a conflict of rights, and to insure to each the uninterrupted enjoyment of his own so far as is reasonably consistent with a like enjoyment of rights by others.



Continuing, the court said:

It goes without saying that barbering requires a degree of skill, proficiency, and training. Then again, the act requires a high physical and moral standard for the barber. It requires training, skill, and efficiency for the barber, and requires sanitary regulations in reference to the barber and barber shop patronized by the general public. All in the class are treated alike. We think the regulations reasonable and the whole act in the interest of skill and proficiency, health and sanitation; and brings the barber and barber shop up to a high standard for the protection of the health of the public.

In regard to the right of the State to require the payment of the tax, the court quoted from the assistant attorney general in part as follows:

The annual occupation tax of the revenue act is for the privilege of exercising the trade of barbering and is simply a revenue act, whereas, the barbers' act is an exercise of the public power of the State to secure the public welfare by requiring proven capacity in the barbers and sanitary arrangements both in the barber shop and the tools that are used therein. The fees levied in this act are solely to pay the expenses of its operation and those of proper inspection by the State board of health.

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### English Decision on Legality of Fines for Poor Work

**T**HE custom of fining weavers for poor work is of long standing in the English textile industry, and though it has sometimes led to serious industrial disturbances, it is only within the current year that its legality has been contested in court. A weaver employed in Nelson was fined 1s. (24 cents) for defective work and brought suit against his employers, claiming that their action in fining him was contrary to section 3 of the truck act of 1831. In a considered judgment given in the chancery division, his claim was upheld. According to the Manchester Guardian's report of the case (May 17, 1930), the judge not only pronounced the fine a violation of the truck act, but held that on other grounds it could not be sustained.

The employers defended their action on four grounds. First, they claimed that the employee's wages were payable only in respect to merchantable cloth, and that as the three yards for which the fine was imposed were not marketable the worker had no right to the shilling or to any other sum. Second, they contended that they had a right to deduct from his wages the loss they sustained through his carelessness, and since the amount deducted was less than their loss, he had no ground of complaint. Third, the plaintiff was employed on the same terms as the other operatives at the mill, and as the others were under a similar liability to deductions, he must be held to have agreed to the same as a part of his contract of service. Lastly, they said, there was a usage in the cotton-weaving trade, which the law recognized, which permitted the employer to make deductions for poor work as long as the deductions did not exceed the loss the employer suffered.

The judge did not admit the validity of any of these claims. Under the uniform price list, he held, the weaver was entitled to his wages whether or not his work was marketable, subject to the employer's right to discharge him if his work were unsatisfactory. There was nothing in his contract of service rendering him liable to the fine. As to the matter of usage, the custom was not universal, "the evidence

being that in some 15 per cent of the mills there was no such practice, while in others it had been suspended to see whether it could not be got rid of." Moreover, the mere fact that it was a custom of long standing did not give it legal validity.

In his view this was a usage which the law had not recognized, and it was one which, being dependent upon the will of the master, was not reasonable or certain. It was said that the matter did not depend entirely upon the will of the master, because it was open to the weaver, if he objected to the deduction, to take steps to recover it. But a usage which left it to the will of the master to decide whether there should be a deduction or not was none the less objectionable because it might not be impossible in a court of law for the operative to get a decision that the case was not one for a fine at all. Even if he had been able to come to the conclusion that the practice was otherwise unobjectionable, the deduction would be illegal under the truck act. Once, however, he had decided that the usage was not one that the law would recognize, then, apart from the truck act, there could be no justification for the deduction.

In the circumstances he held that the plaintiff was entitled to the declaration he claimed, and he ordered the defendants to pay him the sum of 1s. (24 cents) and also to pay the costs of the action.

The decision is said to have occasioned some surprise and to be looked upon very differently by the employees and the employers. The latter are considering the advisability of appealing from the decision, feeling that the sweeping away of the fining system will create a difficult situation for them in maintaining discipline, while the employees feel that the verdict is for them an important victory and a matter for unqualified satisfaction.

# LABOR TURNOVER

## Labor Turnover in American Factories

THE Bureau of Labor Statistics presents herewith its labor turnover indexes for May for manufacturing as a whole and for eight separate industries. The indexes for manufacturing as a whole are made up from reports received from representative plants employing nearly 1,500,000 people in 75 different industries. The number of firms reporting to the bureau in the eight industries for which separate indexes are shown equal at least 25 per cent of the wage earners in such industries, as shown by the Census of Manufactures of 1927.

TABLE 1.—AVERAGE LABOR TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES<sup>1</sup>

[The rate is per 100 employees on the pay roll. The monthly rate is the rate for the calendar month. The equivalent annual rate is the rate for the month expressed as an annual rate]

### A.—Monthly Rates

Month	Separation rates								Accession rate		Net turnover rate <sup>3</sup>	
	Quit		Lay-off		Discharge		Total <sup>2</sup>		1929	1930	1929	1930
	1929	1930	1929	1930	1929	1930	1929	1930				
January.....	2.26	1.11	0.35	1.04	0.45	0.24	3.06	2.39	4.98	2.01	3.06	2.01
February.....	2.28	1.23	.36	1.06	.46	.25	3.20	2.53	4.36	2.06	3.20	2.06
March.....	3.12	1.38	.48	1.03	.57	.30	4.17	2.71	5.20	1.95	4.17	1.95
April.....	3.56	1.45	.45	1.16	.57	.27	4.58	2.88	5.77	2.00	4.58	2.00
May.....	3.46	1.50	.48	1.18	.48	.26	4.42	2.94	5.09	2.10	4.42	2.10
June.....	3.25	.....	.44	.....	.51	.....	4.20	.....	5.01	.....	4.20	.....
July.....	3.03	.....	.42	.....	.49	.....	3.94	.....	5.21	.....	3.94	.....
August.....	3.26	.....	.41	.....	.45	.....	4.12	.....	4.61	.....	4.12	.....
September.....	3.14	.....	.52	.....	.50	.....	4.16	.....	4.91	.....	4.16	.....
October.....	2.42	.....	.80	.....	.40	.....	3.62	.....	3.91	.....	3.62	.....
November.....	1.59	.....	1.26	.....	.30	.....	3.15	.....	1.95	.....	1.95	.....
December.....	1.08	.....	1.21	.....	.20	.....	2.49	.....	1.24	.....	1.24	.....
Average.....	2.71	.....	.60	.....	.45	.....	3.76	.....	4.35	.....	3.76	.....

### B.—Equivalent Annual Rates

January.....	26.7	13.1	4.2	12.2	5.3	2.8	36.2	28.1	58.6	23.7	26.2	23.7
February.....	31.0	16.0	4.7	13.8	6.0	3.2	41.7	33.0	56.9	26.9	41.7	26.9
March.....	36.8	16.3	5.7	12.1	6.7	3.5	49.2	31.9	61.2	23.0	49.2	23.0
April.....	43.3	17.7	5.5	14.1	6.9	3.3	55.7	35.1	70.2	24.3	55.7	24.3
May.....	40.8	17.7	5.7	13.9	5.6	3.1	52.1	34.7	59.9	24.7	52.1	24.7
June.....	39.5	.....	5.4	.....	6.2	.....	51.1	.....	60.9	.....	51.1	.....
July.....	35.7	.....	5.0	.....	5.8	.....	46.5	.....	61.4	.....	46.5	.....
August.....	38.4	.....	4.8	.....	5.3	.....	48.5	.....	54.3	.....	48.5	.....
September.....	38.2	.....	6.3	.....	6.1	.....	50.6	.....	59.7	.....	50.6	.....
October.....	28.5	.....	9.4	.....	4.7	.....	42.8	.....	46.0	.....	42.8	.....
November.....	19.4	.....	15.3	.....	3.7	.....	38.4	.....	23.7	.....	23.7	.....
December.....	12.7	.....	14.2	.....	2.4	.....	29.5	.....	14.6	.....	14.6	.....
Average.....	32.6	.....	7.2	.....	5.4	.....	45.2	.....	52.3	.....	45.2	.....

<sup>1</sup> The form of average used is the unweighted median of company rates.

<sup>2</sup> Arithmetic sum of quit, lay-off, and discharge rates.

<sup>3</sup> The net turnover rate is the accession rate when it is lower than the separation rate, and the separation rate when it is lower than the accession rate.



The form of average used in the following tables is the unweighted median. In determining a median rate the rates for the several establishments are arranged in order from lowest to highest. The rate falling in the center of this arrangement of rates is the median or middle rate. In other words, it is a rate which has as many establishments above as below. Since it is an unweighted form of average, the size of the different establishments is not considered nor are the deviations from the median. The number of employees used is the average number on the pay roll during the period.

Table 1 shows for all industries the separation rate subdivided into the quit, discharge, and lay-off rates; also the accession rate expressed on both a monthly and an equivalent annual basis.

It will be noticed in addition to the several separation rates and the accession rate the bureau shows a net turnover rate. The net turnover rate means the rate of replacement of employees in a plant. It is the number of positions that are vacated and filled during the period per 100 employees. The net turnover rate is the same as the separation rate in a plant that is increasing its number of workers. On the other hand, the net turnover rate is the same as the accession rate when a plant is reducing its force. The net turnover rate for May is the same as the accession rate, 2.10. The quit, lay-off, and accession rates were all higher for May than for April, while the discharge rate was slightly lower during May than April. The May, 1930, quit rate was less than half of the May, 1929, quit rate. In contrast, the lay-off rate for May, 1930, was over two and one-half times that of May, 1929. The discharge rate for May, 1930, was much lower than the May, 1929, discharge rate. The accession rate for May, 1929, was 5.09, and for May, 1930, only 2.10.

Table 2 shows the quit, discharge, lay-off, accession and net turnover rates for automobiles, boots and shoes, cotton manufacturing, iron and steel, sawmills, and slaughtering and meat packing for January, February, March, April, and May; foundries and machine shops for February, March, April, and May; and furniture for April and May, expressed both on a monthly and an equivalent annual basis.

The automotive industry for May showed an accession rate of 2.74 compared with a total separation rate of 5.34. The quit, discharge, and accession rates were all higher for May than for April, while the May lay-off rate was much lower than the April lay-off rate.

In the boot and shoe industry the total separation rate was 2.41 and the accession rate 2.16. Comparing the May rates with the April rates, the quit, discharge and lay-off rates were all lower, while the accession rate was higher.

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN AUTOMOBILES, BOOTS AND SHOES, COTTON MANUFACTURING, FURNITURE, FOUNDRIES AND MACHINE SHOPS, IRON AND STEEL, SAWMILLS, AND SLAUGHTERING AND MEAT PACKING

[The rate is per 100 employees on the pay roll. The monthly rate is the rate for the calendar month and the equivalent annual rate for month expressed as an annual rate]

Industry, year and month, 1930	Separation rates								Accession rate		Net turn- over rate <sup>1</sup>	
	Quits		Discharges		Lay-offs		Total					
	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual	Monthly	Equivalent annual
<b>Automobiles:</b>												
January.....	1.27	15.0	0.59	7.0	2.22	26.2	4.08	48.2	8.20	96.9	4.08	48.2
February.....	1.10	14.3	.15	1.9	1.86	24.3	3.11	40.5	3.40	44.3	3.11	40.5
March.....	1.56	18.4	.42	4.9	1.95	23.0	3.93	46.3	5.31	62.6	3.93	46.3
April.....	1.84	22.4	.33	4.0	2.70	32.8	4.87	59.2	4.06	49.4	4.06	49.4
May.....	1.39	16.4	.27	3.2	3.68	43.3	5.34	62.9	2.74	32.3	2.74	32.3
<b>Boots and shoes:</b>												
January.....	1.51	17.8	.46	5.4	.28	3.3	2.25	26.5	5.26	61.9	2.25	26.5
February.....	1.23	16.0	.39	5.1	.72	9.4	2.34	30.5	2.06	26.9	2.06	26.9
March.....	1.56	18.4	.36	4.2	.44	5.2	2.36	27.8	2.79	27.8	2.36	27.8
April.....	1.73	21.1	.32	3.9	1.01	12.3	3.06	37.3	2.11	25.7	2.11	25.7
May.....	1.45	17.1	.25	2.9	.71	8.4	2.41	28.4	2.16	25.4	2.16	25.4
<b>Cotton manufacturing:</b>												
January.....	1.20	14.2	.11	1.3	.29	3.4	1.60	18.9	2.40	28.3	1.60	18.9
February.....	1.20	15.6	.19	2.5	.14	1.8	1.53	19.9	1.62	21.1	1.53	19.9
March.....	1.59	18.7	.28	3.3	.25	2.9	2.12	24.9	2.53	29.8	2.12	24.9
April.....	1.34	16.3	.09	1.1	.44	5.4	1.87	22.8	2.34	28.5	1.87	22.8
May.....	1.40	16.5	.20	2.3	.59	6.9	2.19	25.7	2.25	26.5	2.19	25.7
<b>Foundries and machine shops:</b>												
February.....	.77	10.1	.05	.7	.80	10.4	1.62	21.2	2.26	29.5	1.62	21.2
March.....	1.12	13.2	.16	1.9	1.21	14.2	2.49	29.3	2.33	27.4	2.33	27.4
April.....	1.26	15.3	.09	1.1	1.12	13.6	2.47	30.0	2.42	29.5	2.42	29.5
May.....	1.23	14.5	.25	2.9	1.88	22.1	3.36	39.5	1.83	21.6	1.83	21.6
<b>Furniture:</b>												
April.....	1.22	14.8	.10	1.2	1.29	15.7	2.61	31.7	1.33	16.2	1.33	16.2
May.....	.76	8.9	.23	2.7	2.01	23.7	3.00	35.3	1.15	13.5	1.15	13.5
<b>Iron and steel:</b>												
January.....	1.37	16.1	.23	2.8	1.63	19.2	3.23	38.1	3.87	45.6	3.23	38.1
February.....	1.07	14.0	.18	2.4	.74	9.7	1.99	26.1	2.97	38.7	1.99	26.1
March.....	1.35	15.9	.20	2.3	.45	5.3	2.00	23.5	2.54	29.9	2.00	23.5
April.....	1.51	18.4	.19	2.3	.30	3.7	2.00	24.4	2.43	29.6	2.00	24.4
May.....	1.40	16.5	.17	2.0	.87	10.3	2.44	28.8	2.06	24.3	2.06	24.3
<b>Sawmills:</b>												
January.....	1.57	18.5	.44	5.2	1.77	20.9	3.78	44.6	2.54	29.9	2.54	29.9
February.....	1.77	23.1	.18	2.4	1.81	23.6	3.76	49.1	4.38	57.1	3.76	49.1
March.....	1.90	22.4	.11	1.3	1.10	13.0	3.11	36.7	4.86	57.2	3.11	36.7
April.....	1.62	19.7	.19	2.3	1.21	14.7	3.02	36.7	4.46	54.3	3.02	36.7
May.....	1.33	15.7	.11	1.3	1.46	17.2	2.90	34.2	3.48	41.0	2.90	34.2
<b>Slaughtering and meat packing:</b>												
January.....	1.60	18.9	.51	6.0	1.52	17.9	3.63	42.8	4.08	48.1	3.63	42.8
February.....	1.54	20.1	.45	5.9	4.33	56.5	6.32	82.5	2.92	38.1	2.92	38.1
March.....	1.89	22.3	.48	5.6	2.62	30.9	4.99	58.8	2.84	33.5	2.84	33.5
April.....	1.90	23.1	.46	5.6	1.91	23.3	4.27	52.0	4.28	52.1	4.27	52.0
May.....	2.38	28.0	.54	6.4	1.52	17.9	4.44	52.3	6.10	71.0	4.44	52.3

<sup>1</sup> The net turnover rate is the separation rate when this rate is lower than the accession rate, and the accession rate when it is lower than the separation rate.

Cotton manufacturing showed a higher accession rate than total separation rate, the former being 2.25 and the latter 2.19. The May quit, discharge, and lay-off rates were all higher than the April rates. However, the accession rate was lower than for April.

The total separation rate in the foundry and machine shop industry was 3.36 and the accession rate 1.83. The May quit rate and accession rate were lower than the like rates in April, while the discharge and lay-off rates were higher in May than in April.

In the furniture industry also the total separation rate was higher than the accession rate. Comparing the May rates with the April rates we find that the quit rate and the accession rate were higher, while the discharge and lay-off rates were lower.

In the sawmill industry there was a higher accession rate than total separation rate, the former being 3.48 compared with 2.90 for the latter. The quit, discharge, and accession rates were all lower than for April, while the lay-off rate was higher.

The accession rate in the slaughtering and meat-packing industry was much higher than the total separation rate. The quit, discharge, and accession rates were all higher for May than for April. The lay-off rate was lower.

The quit rate for slaughtering and meat packing was higher than the quit rate for industry as a whole. The automobile, boot and shoe, cotton manufacturing, foundry and machine shop, furniture, iron and steel, and sawmill quit rates were all lower than the all-industry quit rate.

Automobiles and slaughtering and meat packing had a higher discharge rate than the all-industry discharge rate, while boots and shoes, cotton manufacturing, foundry and machine shops, furniture, iron and steel, and sawmills all had a lower discharge rate than the all-industry rate.

The lay-off rate for all industries was 1.18. This was exceeded by the lay-off rate for automobiles, foundries and machine shops, furniture, sawmills, and slaughtering and meat packing. Boots and shoes, cotton manufacturing, and iron and steel had a lower lay-off rate than that shown for all industries.

Comparing accession rates, it is found that automobiles, boots and shoes, cotton manufacturing, sawmills, and slaughtering and meat packing had accession rates exceeding that for all industries, and foundries and machine shops, furniture, and iron and steel had lower rates than the all-industries accession rate.

The highest quit rate was shown by the slaughtering and meat-packing industry, and the lowest by the furniture industry. Slaughtering and meat packing also had the highest discharge rate, while the lowest discharge rate was registered by the sawmill industry. The highest lay-off rate occurred in the automobile industry and the lowest in the boot and shoe industry. Accessions were higher in the slaughtering and meat-packing industry than in any of the other industries for which separate indexes are shown and were lower in the furniture industry than in any of the other industries.



# COOPERATION

## Development of Cooperative League of the United States<sup>1</sup>

**A** SMALL conference of private individuals held in New York City in 1915 resulted in the organization of The Cooperative League of America, incorporated in 1922 as The Cooperative League of the U. S. A. For three or four years this league was little more than a propaganda agency subsidized exclusively from private funds. In 1918 the first attempt was made to hold a national convention at Springfield, Ill. Some score or more of cooperative societies and a number of interested individuals were present. At the second convention, in Cincinnati in 1920, there were 40 societies represented, and at the third convention in Chicago a larger number of delegates but fewer cooperatives were in attendance. By this time, however, the league did have a small but active dues-paying membership, and at the fourth congress, held in New York in 1924, 165 societies were represented. In 1926 the convention, at Minneapolis, again had more delegates representing fewer societies, and the last convention, held at Waukegan, Ill., in 1928, counted 81 voting delegates, speaking for 106 societies which were paying full dues to the league. It is not until the last four years that membership requirements have been strictly enforced.

Membership requirements vary in different sections. In the North Central and Eastern States, where the societies are sufficiently numerous to warrant it, district leagues have been organized with local secretaries in charge. The Northern States' League now requires membership dues of 20 cents per capita annually from each of its affiliated distributive societies (3 cents are required from insurance or credit societies). The Eastern League requires 22½ [cents] per capita annually (3 cents from credit or insurance societies). The Central States League bases its membership requirements upon the volume of sales, each member paying one-tenth of 1 per cent of its gross income as dues. Societies in other sections of the country join the national league directly and pay 10 cents per capita (1 cent for credit and insurance societies). There are, however, less than 20 of these direct affiliations. Another district league, it is expected, will be organized in the far Northwest within a year or two.

Each district league is independent and autonomous and the national league is a federation of such district leagues. At the biennial national congresses the local societies have direct representation, and the district leagues themselves have only a restricted representation. The district league turns over to the national league 5 cents of the per capita dues payment received from each of its local societies (one-half of 1 cent for each of its credit unions or insurance societies). One delegate to national congresses is authorized for each 500 shareholders or major fraction thereof in the local societies. The district leagues hold annual conventions.

<sup>1</sup> Extract from article in Cooperative League Yearbook, 1930, pp. 52-61: "Consumers' cooperation in the United States of America," by Cedric Long.

The largest of these district leagues is that in the Northern States, which now has more than 100 societies—90 of them stockholders of Cooperative Central Exchange, which is affiliated in a block. This league employs a full-time secretary, one field man, and two accountants, and in addition the Cooperative Central Exchange has two people employed in its educational department and five accountants. The Exchange for 10 years has conducted an annual six to eight weeks' training school for employees, always in the Finnish language; and the Northern States League itself has conducted five such schools in English. This league has published a yearbook for the past four years. For several years a northern league paper was published bimonthly, but the material formerly carried in this paper is now published regularly in the national magazine, *Cooperation*.

The eastern league, organized in 1925, has an affiliation of 30 societies representing 10 or 15 different nationalities. It employs, part time, the secretary of the national league to take care of its secretarial work. For three years it published a paper bimonthly, but this paper has now been enlarged and is published only quarterly. The league has a board of 11 directors, who meet quarterly. Unlike the situation in the Northern States, the wholesale in the East is the direct creation and child of the league, and the relations between the two branches of the movement are thus much closer than elsewhere in the country. One training school, similar to those in the Northern States, was held in 1927, and a 1-week summer institute was conducted in the summer of 1929. An active educational committee in New York takes charge of the paper and of other general educational activities, most of them, however, almost exclusively for the societies located in the Greater New York area. This committee is directly elected by the annual convention.

The Central States League, organized in 1927, has 13 affiliated societies and a full-time secretary whose offices are in Bloomington, Ill. A monthly paper is published and joint buying in three or four commodities carried on for the stores. All of these societies, with one exception, are located in the State of Illinois. The league owns and operates a printing plant for the benefit of its members and also operates a death benefit society.

Directors of The Cooperative League of the U. S. A. are elected for 3-year terms, one-third of the board (on which there are 17 members) being elected at each biennial congress. Board meetings are held annually, and an executive committee, composed of directors living in the East, meets more often.

The league maintains an accounting bureau which audits books for societies in many of the Eastern States and as far west as Illinois, but does not invade the territory covered by the accounting department of the Cooperative Central Exchange or the Northern States League. The monthly paper, *Cooperation*, is the official organ of the movement in the United States, having been established in 1914.

There are more than a score of pamphlets and leaflets published and distributed by the national office, but in the United States we have not yet gone far in providing these miscellaneous propaganda and educational services.

Only consumers' distributive, credit, or service societies are admitted into constituent membership in the league. If marketing associations,

which are much larger and ever so much more numerous, were admitted, the consumers' interests would very soon be subordinated to those of the producers—in a country where almost all of the cooperative idealism is to be found within the consumers' movement. There are about one-half dozen credit unions in the league membership, six cooperative housing associations, and three insurance societies. Thus the membership is almost entirely one of distributive societies, the stores being vastly in the majority. There are about 10 societies engaged exclusively in operating bakeries, 1 which handles dairy products exclusively, and 2 societies which operate only restaurants. Some of the larger societies have departments conducting these several kinds of business.

The league employs an executive secretary, a financial secretary, an accountant, and two office secretaries, and has the part-time services of its president and its educational secretary. It is quartered in New York in a building the use of which is donated without cost and which provides ample room for expansion of its activities.

In conclusion it may be said that though our movement in America is backward as compared with cooperation in Europe, nevertheless we are convinced that the work of the league during these 15 years has been of inestimable value in clarifying the aims, standardizing the methods, and unifying the progressive forces in the consumers' movement.

STATUS OF SOCIETIES AFFILIATED TO THE COOPERATIVE LEAGUE AS OF DECEMBER 31, 1928<sup>1</sup>

*Distributive and housing societies*

District league and State	Number of affiliated societies	Number of members	Number of employees	Share capital	Surplus and reserves	Sales, 1928	Net gain, 1928
<b>Northern States League:</b>							
Michigan.....	16	4,641	150	\$205,110	\$250,535	\$2,059,424	\$112,072
Minnesota.....	42	13,650	579	1,303,061	634,716	6,504,485	195,975
South Dakota.....	1	150	6	20,900	14,270	132,854	2,716
Wisconsin:							
Retail societies.....	14	2,359	54	109,697	78,936	765,834	17,739
Wholesale society.....	1	84	47	65,733	36,459	1,517,813	23,894
<b>Total.....</b>	<b>74</b>	<b>20,884</b>	<b>836</b>	<b>1,704,501</b>	<b>973,754</b>	<b>10,980,409</b>	<b>352,396</b>
<b>Central States League:</b>							
Illinois.....	11	3,416	127	141,259	167,698	1,477,112	43,429
<b>Eastern States League:</b>							
Connecticut.....	1	175	51 <sup>2</sup>	6,495	9,554	75,725	4,873
Massachusetts.....	8	2,332	128	93,452	102,247	1,168,331	28,568
New Jersey.....	1	100	31 <sup>2</sup>	2,180	1,214	45,772	598
New York.....	12	10,731	575 <sup>2</sup>	852,332	6,574	2,976,589	82,336
<b>Total.....</b>	<b>22</b>	<b>13,338</b>	<b>712<sup>2</sup></b>	<b>954,459</b>	<b>106,441</b>	<b>4,266,417</b>	<b>116,375</b>
<b>Direct affiliations:</b>							
California.....	2	499	43	18,975	68,843	256,713	12,101
New York.....	2	573	2	136	913	3,830	365
North Dakota.....	1	59	10	6,225	19,078	140,413	8,194
Ohio.....	3	496	19	32,391	113,605	256,966	304
Washington (wholesale society).....	1	15	2	30,040	3,533	109,862	968
<b>Grand total.....</b>	<b>116</b>	<b>439,295</b>	<b>1,752</b>	<b>2,887,986</b>	<b>1,444,973</b>	<b>17,505,836</b>	<b>532,794</b>

<sup>1</sup> Compiled from detailed tables in Cooperative League Yearbook, 1930.

<sup>2</sup> Member societies.

<sup>3</sup> Items given add to \$1,023,916.

<sup>4</sup> Deficit.

<sup>5</sup> Net loss.

<sup>6</sup> Items given add to 39,270.

<sup>7</sup> Items given add to \$17,491,722.



STATUS OF SOCIETIES AFFILIATED TO THE COOPERATIVE LEAGUE AS OF  
DECEMBER 31, 1928—Continued*Credit unions and mutual savings banks*

District league and State	Num- ber of affili- ated societies	Num- ber of mem- bers	Num- ber of em- ployees	Share capital	Surplus and reserves	Savings deposits	Net gain, 1928
Northern States League:							
Minnesota.....	1	360	1	\$2, 170	\$888	\$5, 117	\$618
Wisconsin.....	1	53	1	-----	7, 939	282, 867	1, 061
Eastern States League:							
Massachusetts.....	1	1, 960	1½	221, 752	66, 689	477, 374	16, 915
New York.....	1	300	1	8, 300	2, 563	4, 953	811
Direct affiliations:							
Massachusetts.....	1	1, 000	3	501, 437	66, 448	59, 985	34, 010
Wisconsin.....	1	50	4	-----	50, 186	1, 378, 955	7, 257
Grand total.....	6	3, 723	12	733, 659	* 192, 713	2, 209, 251	60, 672

*Fire and life insurance societies*

						Gross income	
Northern States League:							
Michigan.....	1	28, 744	46	-----	\$87, 463	\$901, 811	\$87, 463
Central States League:							
Illinois.....	1	476	2	-----	11	( <sup>9</sup> )	( <sup>10</sup> )
Direct affiliations:							
New York.....	2	52, 460	13	-----	177, 315	179, 999	31, 093
Grand total.....	4	81, 680	61	-----	264, 789	1, 081, 810	118, 556

\* Items given add to \$194,713.

<sup>9</sup> No data.<sup>10</sup> Nonprofit organization.**Labor Banks in Denmark, Austria, and Germany**

THE following information regarding labor banks in Denmark, Austria, and Germany is given in a press release of the International Federation of Trade Unions, dated April 30, 1930.

The Danish Labor Bank has recently published its annual report for 1929, which shows that the bank has had a successful year. The total turnover in 1929 was 814,806,227 kroner (\$218,368,069), or about 100,000,000 kroner (\$26,800,000) more than the preceding year. The total amount of the balance sheet at the end of 1929 was 38,117,473 kroner (\$10,215,483), giving it the eighth place among Danish banks. The surplus amounted to 463,246 kroner (\$124,150).

As the increased business of the labor bank has, under the Danish law, made necessary an increase in its capital, the bank has authorized its board of directors to do this, and has decided to issue preference shares to the extent of 1,000,000 kroner (\$268,000) beyond the 6,000,000 kroner (\$1,608,000) share capital provided for in the articles of association.

The Vienna Labor Bank in Austria has also shown a growth. Austria's economic position is not strong and the failure of the General Land Bank (*Allgemeine Bodendredit-Anstalt*), one of the oldest banks in Austria, had a depressing effect upon the entire business field in Austria. During the last quarter of 1929 the deposits in private banks fell by 126,000,000 schillings (\$17,766,000.) The Vienna Labor Bank, however, reported an increase in business.

During 1929, deposits in this bank rose from 44,900,000 schillings (\$6,330,900) to 53,300,000 schillings (\$7,515,300), and the net profits from 580,000 schillings (\$81,780) to 650,000 schillings (\$91,650). The funds of trade-unions and cooperative societies, which are the only shareholders, were increased by a dividend of 10 per cent, while the sum of 320,000 schillings (\$45,120) was allotted to the reserves. In view of the increasing business, it was decided that in 1930 the capital should be increased to 4,000,000 schillings (\$564,000). The main use to which the Vienna Labor Bank puts its funds is the financing of public utility and cooperative enterprises.

The 1929 report of the labor bank in Germany (Bank of Workers, Salaried Employees, and Civil Servants) shows that deposits rose during the year from 117,000,000 marks (\$27,846,000) to over 163,000,000 marks (\$38,794,000), while the turnover increased from 2,036,000,000 marks (\$484,568,000) to 2,787,000,000 marks (\$663,306,000). On account of general economic conditions in the country the increase in the savings deposits was not maintained throughout the year at as rapid a rate as at the beginning, but there nevertheless was an increase for the entire year.

# HOUSING

## Building Permits in Principal Cities, May, 1930

THE Bureau of Labor Statistics received building permit reports from 288 comparable cities for the months of April and May, 1930. The costs shown in the tables below are for buildings in the corporate limits of the cities enumerated. No land costs are included.

The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, new nonresidential buildings, total building operations (including alterations and repairs), and the number of families provided for in new buildings by districts, as shown by permits issued in the 288 identical cities, together with the percentage of increase or decrease in May, 1930, as compared with April, 1930.

TABLE 1.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 288 CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwelling houses					
	April, 1930	May, 1930	April, 1930	May, 1930	April, 1930	May, 1930	April, 1930	May, 1930
New England.....	\$5,045,325	\$4,523,168	710	807	\$5,903,287	\$5,617,494	\$13,045,476	\$12,653,185
Middle Atlantic.....	19,593,871	19,109,283	3,619	3,998	41,511,983	28,976,482	71,672,810	60,048,635
East North Central.....	12,945,092	14,553,112	2,672	2,505	16,266,221	21,319,916	34,616,057	40,447,503
West North Central.....	4,416,714	2,789,900	921	605	4,957,863	5,723,241	10,952,266	10,093,399
South Atlantic.....	4,763,541	2,757,504	886	575	10,110,204	6,367,348	16,785,189	11,686,689
South Central.....	4,769,685	3,822,852	1,361	1,107	7,605,182	9,239,817	14,302,782	14,396,420
Mountain and Pacific.....	9,251,761	10,194,982	2,584	2,663	7,071,900	7,389,422	19,330,680	20,406,480
Total.....	60,785,989	57,750,801	12,753	12,260	93,426,640	84,633,720	180,705,260	169,732,311
Per cent of change.....		-5.0		-3.9		-9.4		-6.1

In the 288 identical cities for which reports were received for both April and May there was a decrease of 6.1 per cent in the estimated expenditures for all building operations, comparing May with April. The permits issued during the month of May indicate an expenditure of \$169,732,311. April permits indicated an expenditure of \$180,705,260. Permits issued for residential buildings show a decrease of 5 per cent in the estimated cost of this class of dwelling, comparing May with April. The estimated expenditures for nonresidential buildings during May decreased 9.4 per cent as compared with the previous month. Families provided for in new dwelling houses decreased 3.9 per cent in the same period. While a decrease was shown in the total expenditures in these 288 cities, three of the seven geo-



graphical districts show increases, the largest being in the East North Central division. Two geographic districts showed increases in new residential building and four of the seven showed increases in nonresidential building. There were 12,260 dwelling units in the new residential buildings for which permits were issued during the month of May. This compares with 12,753 new dwelling units in these 288 cities during the month of April. Three geographic districts showed increases in the number of families provided with dwelling places in the new buildings.

Table 2 shows estimated cost of additions, alterations, and repairs, as shown by permits issued in the 288 identical cities, together with the percentage of increase or decrease in May as compared with April by districts.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 288 CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of increase or decrease, May, compared with April
	April, 1930	May, 1930	
New England.....	\$2,096,864	\$2,512,523	+19.8
Middle Atlantic.....	10,566,956	11,962,870	+13.2
East North Central.....	5,404,744	4,574,475	-15.4
West North Central.....	1,577,689	1,580,258	+0.2
South Atlantic.....	1,911,444	2,561,837	+34.0
South Central.....	1,927,915	1,333,751	-30.8
Mountain and Pacific.....	3,007,019	2,822,076	-6.2
Total.....	26,492,631	27,347,790	+3.2

During the month of May building permits were issued in these 288 cities for repairs and alterations to old buildings to cost \$27,347,790, which is an increase of 3.2 per cent over the \$26,492,631 shown by the April permits. Increases in indicated expenditures for repairs were noted in the New England, Middle Atlantic, West North Central, and South Atlantic divisions, the largest increase, 34 per cent, occurring in the South Atlantic division. Decreases in repairs and alterations were shown in the other three divisions. The largest decrease, 30.8 per cent, was registered in the South Central division.

Table 3 shows the index numbers of families provided for and the index numbers of indicated expenditures for residential buildings, for nonresidential buildings, for alterations and repairs, and for total building operations. These indexes are worked on the chain system with the monthly average of 1929 equaling 100.

TABLE 3.—INDEX NUMBER OF FAMILIES PROVIDED FOR; ESTIMATED COSTS OF NEW RESIDENTIAL BUILDINGS; NEW NONRESIDENTIAL BUILDINGS; ALTERATIONS AND REPAIRS; AND TOTAL BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER

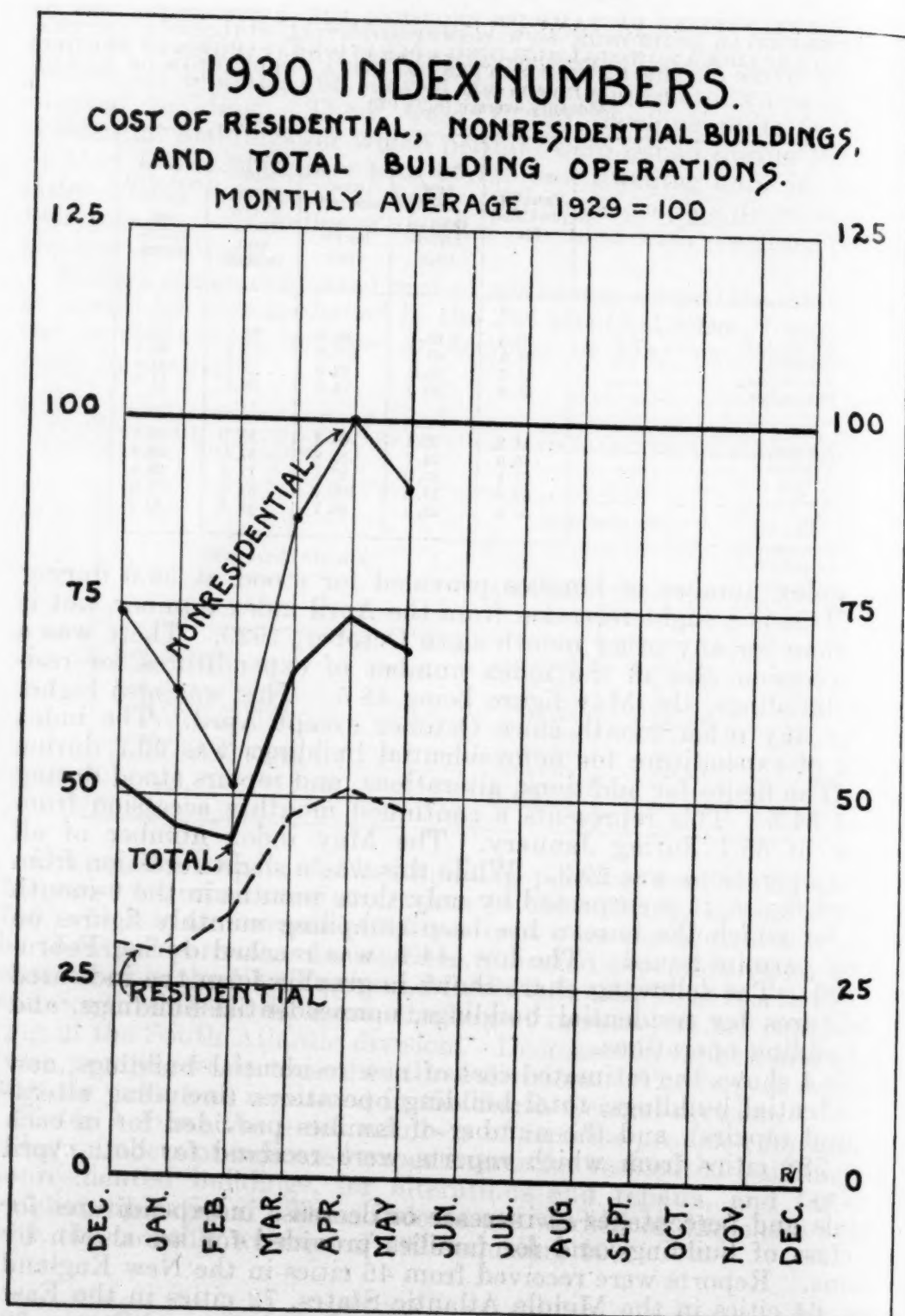
[Monthly average 1929=100]

Month	Families provided for	Cost of new residential buildings	Cost of new nonresidential buildings	Cost of additions, alterations, and repairs	Total cost of all building operations
1929					
September.....	70.2	63.7	81.3	95.0	73.7
October.....	64.4	61.6	107.9	115.2	85.7
November.....	51.7	44.8	89.6	95.2	68.1
December.....	35.9	30.2	74.3	66.1	51.7
1930					
January.....	34.2	29.4	64.3	55.1	46.1
February.....	43.0	34.7	51.8	57.5	44.1
March.....	57.1	47.2	87.1	77.5	66.4
April.....	62.0	51.0	100.1	81.8	73.8
May.....	59.6	48.5	90.7	84.5	69.3

The index number of families provided for stood at 59.6 during May. This is a slight recession from the April index number, but is higher than for any other month since October, 1929. There was a slight recession also in the index number of expenditures for residential buildings, the May figure being 48.5. This was also higher than for any other month since October except April. The index number of expenditure for nonresidential buildings was 90.7 during May. The figure for additions, alterations, and repairs stood during May at 84.5. This represents a continued monthly accession from the low of 55.1 during January. The May index number of all building operations was 69.3. While this was a slight recession from the April figure, it is surpassed by only three months in the 9-month period for which the bureau has been compiling monthly figures on building permits issued. The low, 44.1, was reached during February, 1930. The following chart shows in graphic form the indicated expenditures for residential buildings, nonresidential buildings, and total building operations.

Table 4 shows the estimated cost of new residential buildings, new nonresidential buildings, total building operations (including alterations and repairs), and the number of families provided for in each of the 288 cities from which reports were received for both April and May.

Totals and percentages of increase or decrease in expenditures for each class of buildings and for families provided for are shown by divisions. Reports were received from 46 cities in the New England States, 64 cities in the Middle Atlantic States, 72 cities in the East North Central States, 23 cities in the West North Central States, 30 cities in the South Atlantic States, 28 cities in the South Central States, and 25 cities in the Mountain and Pacific States.



#### New England States

A DECREASE of 3 per cent was shown in estimated expenditures for total building operations in the New England States, comparing May building permits with April building permits. There was a decrease of 10.4 per cent in the indicated expenditures for new residential buildings and a decrease of 4.8 per cent in the indicated



expenditures for new nonresidential buildings in this district, comparing May with April. Families provided for in new buildings increased 13.7 per cent during this period. Increases in total building operations were shown in New Haven, Boston, Brookline, Quincy, Worcester, and Providence. Decreases were shown in Waterbury, Cambridge, Waltham, and Pawtucket. In Providence a permit was issued for a public school building to cost \$1,100,000 and in Boston for an administration building for the Boston City Hospital to cost \$400,000. No reports were received from Bridgeport and New London, Conn., and Lewiston, Me.

#### Middle Atlantic States

IN THE Middle Atlantic States there was a decrease of 16.2 per cent in total building operations, a decrease of 2.5 per cent in expenditures for new residential buildings and a decrease of 30.2 per cent in expenditures for new nonresidential buildings. Family dwelling units provided in new buildings increased 10.5 per cent. Large increases in total building operations were shown in Passaic, Brooklyn, McKeesport, and Pittsburgh. Large decreases were registered in Jersey City, Borough of Queens, Schenectady, and Philadelphia. Permits were issued for eight apartment houses in the Borough of the Bronx to cost nearly \$2,000,000 and for a school to cost \$300,000. In Brooklyn permits were issued for two school buildings to cost over \$4,000,000 and for a public building to cost \$200,000. In Pittsburgh, according to permits issued, nine stores were to be erected at a cost of over \$1,000,000. No reports were received from Erie and Reading, Pa.

#### East North Central States

INCREASES were registered for all classes of buildings in the East North Central States. Indicated expenditures for new residential buildings increased 12.4 per cent; for new nonresidential buildings, 31.1 per cent; and for total building operations, 16.8 per cent. Families provided with dwelling places in new buildings decreased 6.3 per cent. In Chicago there was an increase of over \$5,000,000 in the indicated expenditures for May compared with April indicated expenditures. Other cities showing large increases were East Chicago, Anderson, Flint, Akron, and Sheboygan. Decreases were shown in Evansville, Bay City, Cleveland, Cincinnati, Toledo, and Superior. In East Chicago permits were issued for factory buildings to cost over \$800,000. In Flint a permit was issued for a county jail to cost \$397,000. In Chicago permits were issued for new factory buildings to cost over \$4,000,000 and for two institutional buildings to cost \$1,140,000. No reports were received from South Bend, Ind.; Battle Creek and Port Huron, Mich.; Newark and Zanesville, Ohio; and Racine, Wis.

#### West North Central States

INDICATED expenditures for new residential buildings decreased 36.8 per cent in the West North Central States, but expenditures for new nonresidential buildings increased 15.4 per cent. Expenditures for total building operations decreased 7.9 per cent. The number of family units provided for in new dwellings decreased 34.3 per cent in this district. There were increases in total building operations

in the following cities in this district: Des Moines, Cedar Rapids, Topeka, St. Paul, and Lincoln. Decreases were shown in Sioux City, Hutchinson, Springfield, and Sioux Falls. Permits were issued for an office building in St. Paul to cost \$720,000. No report was received from Kansas City, Mo.

#### South Atlantic States

DECREASES were registered all along the line in the South Atlantic States, ranging from 30.4 in the case of total building operations to 42.1 in the case of new residential buildings. New nonresidential buildings decreased 37 per cent comparing May permits with April permits, and families provided for decreased 35.1 per cent. Most of the cities in this district showed decreases in total expenditures, comparing May with April, but notable exceptions were Charlotte, Columbia, Newport News, and Wheeling. The largest decreases were shown in Washington, Baltimore, and Atlanta. In Baltimore permits were issued for three school buildings to cost over \$1,000,000. No reports were received from Pensacola, Fla.; Hagerstown, Md.; Wilmington, N. C.; Spartanburg, S. C.; Lynchburg, Va.; and Charleston, W. Va.

#### South Central States

A SLIGHT increase was shown in the South Central States for total building operations. This increase, 0.7, was caused by the large increase in new nonresidential buildings. This class of buildings increased 21.5 per cent in indicated expenditures, comparing May permits with April permits. New residential buildings, however, decreased 19.9 per cent and families provided for decreased 18.7 per cent. Louisville, Ky., showed the largest increase of any city in this district. Other large increases were registered in Oklahoma City, Tulsa, Nashville, Austin, and San Antonio. Decreases were shown in Memphis, Fort Worth, and Houston. Permits were issued for an office building in Louisville to cost \$1,600,000 and for amusement buildings to cost nearly \$300,000. In Nashville, Tenn., a permit was issued for a building at Meharry College to cost \$1,500,000. In Austin, Tex., a permit was issued for a public building to cost over \$600,000, and in San Antonio for a church to cost over \$400,000. No reports were received from Birmingham, Ala.; Fort Smith, Ark.; Chattanooga, Tenn.; and El Paso and Laredo, Tex.

#### Mountain and Pacific States

INCREASES were shown in all classes of building and in families provided for in the Mountain and Pacific States. New residential buildings increased 10.2 per cent; new nonresidential buildings, 4.5 per cent; total building operations, 5.6 per cent; and families provided for, 3.1 per cent. Most all of the large cities in this district showed increases in total building operations. An increase of over \$1,500,000 was noted in San Francisco. Increases were also shown in Los Angeles, Denver, Salt Lake City, Seattle, and Spokane. Decreases were shown in Phoenix, Berkeley, Pueblo, Portland, and Tacoma. In Long Beach a permit was issued for a school building to cost \$320,000; in San Francisco, for a school building to cost

\$572,000 and for a public utility building to cost \$575,000. In Seattle permits were issued for two schools to cost nearly \$300,000 and for stores to cost over \$900,000.

No reports were received from Butte and Great Falls, Mont., and Vallejo, Calif.

TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1930

*New England States*

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
Connecticut:								
Greenwich.....	\$330,700	\$258,000	19	14	\$12,100	\$26,750	\$431,730	\$375,650
Hartford.....	101,800	143,800	11	6	760,059	50,065	926,463	274,312
Meriden.....	35,050	25,500	9	6	6,200	14,920	52,585	46,794
New Britain.....	31,000	70,500	4	11	55,300	4,875	117,946	109,950
New Haven.....	258,000	276,000	22	93	70,885	172,500	400,145	499,500
Norwalk.....	226,100	149,850	26	20	68,650	9,750	319,746	187,250
Stamford.....	58,800	48,000	7	8	35,250	108,595	129,328	174,045
Waterbury.....	45,000	39,500	10	10	528,874	124,300	634,224	180,000
Maine:								
Bangor.....	28,300	27,500	8	6	17,900	3,550	47,300	35,200
Portland.....	18,600	36,300	5	8	317,090	80,365	362,265	159,861
Massachusetts:								
Boston <sup>1</sup> .....	534,300	727,800	121	165	840,230	930,842	1,739,827	2,532,277
Brockton.....	22,800	22,900	5	6	8,390	14,230	54,940	52,172
Brookline.....	110,500	467,000	9	28	6,400	54,205	126,245	593,810
Cambridge.....	863,000	109,643	32	14	189,044	109,800	1,156,209	296,846
Chelsea.....	0	0	0	0	3,245	32,100	9,600	36,540
Chicopee.....	33,500	25,000	16	7	4,550	6,385	48,775	38,385
Everett.....	29,000	24,000	8	7	308,910	19,000	351,410	58,110
Fall River.....	16,200	12,600	5	4	62,820	179,196	101,541	206,020
Fitchburg.....	0	6,800	0	2	5,500	2,920	9,470	10,770
Haverhill.....	8,400	15,000	3	6	12,680	16,100	25,830	41,400
Holyoke.....	47,000	21,500	9	2	6,150	8,100	85,200	41,250
Lawrence.....	0	0	0	0	17,150	12,275	24,400	48,625
Lowell.....	13,350	33,100	4	7	7,375	5,050	47,080	54,000
Lynn.....	100,600	42,000	18	10	114,545	22,555	259,170	117,465
Malden.....	57,500	64,500	12	12	10,960	7,620	83,270	88,940
Medford.....	161,200	114,500	32	22	8,500	14,335	183,395	141,841
New Bedford.....	33,000	6,800	4	1	14,235	54,100	66,855	95,000
Newton.....	443,600	358,100	43	33	55,875	12,705	541,596	420,590
Pittsfield.....	76,600	141,750	14	24	15,375	35,650	128,525	199,603
Quincy.....	100,150	73,625	20	16	115,680	324,925	249,832	442,661
Revere.....	42,900	23,400	11	7	3,435	3,480	68,560	38,230
Salem.....	60,800	18,000	8	3	110,550	23,225	200,935	65,795
Somerville.....	0	46,000	0	15	40,460	42,050	79,765	100,185
Springfield.....	138,300	160,900	25	40	727,868	99,790	926,018	409,765
Taunton.....	7,100	12,100	3	2	2,810	17,759	32,765	66,444
Waltham.....	75,600	47,400	17	10	877,800	4,610	965,465	88,560
Watertown.....	64,000	39,000	13	8	7,800	118,225	82,950	163,175
Worcester.....	123,500	227,500	24	46	41,307	945,737	465,352	1,211,337
New Hampshire:								
Manchester.....	19,600	35,100	7	17	5,920	7,880	49,204	61,381
Rhode Island:								
Central Falls.....	5,000	4,000	2	1	400	4,550	7,305	10,500
Cranston.....	112,100	117,600	25	35	19,530	17,235	144,630	138,675
East Providence.....	90,875	70,300	16	14	72,650	29,890	182,655	138,696
Newport.....	29,300	34,400	6	6	4,550	54,030	45,150	112,430
Pawtucket.....	70,400	78,300	15	18	121,400	47,120	216,650	182,900
Providence.....	416,800	264,300	60	35	154,600	1,725,050	809,400	2,280,770
Woonsocket.....	5,000	3,300	2	2	32,285	19,100	53,770	25,475
Total.....	5,045,325	4,523,168	710	807	5,903,287	5,617,494	13,045,476	12,653,185
Per cent of change.....		-10.4		+13.7		-4.8		-3.0

<sup>1</sup> Applications filed.



TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1930—Continued

## Middle Atlantic States

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
<b>New Jersey:</b>								
Atlantic City	\$39,000	0	3	0	\$13,975	\$17,890	\$300,103	\$63,110
Bayonne	34,000	\$79,000	12	46	37,700	300	82,550	91,300
Bloomfield	51,000	164,000	10	26	486,000	11,000	569,000	182,000
Camden	118,000	4,000	36	1	64,000	347,475	208,990	422,215
Clifton	112,000	149,500	22	34	31,295	24,675	151,000	183,825
East Orange	17,500	9,000	3	8	55,975	532,280	92,345	586,965
Elizabeth	71,000	160,000	21	50	86,000	111,000	157,000	271,000
Hoboken	0	0	0	0	2,800	15,000	22,990	35,267
Irvington	164,400	65,550	39	15	32,900	40,220	205,036	115,525
Jersey City	66,500	25,500	17	6	2,582,745	1,830,900	2,710,290	1,910,900
Kearny	72,000	63,000	16	17	144,244	6,025	222,009	72,775
Montclair	100,400	93,000	6	5	8,317	20,000	140,637	144,028
Newark	171,650	266,000	29	52	1,584,034	150,630	1,947,779	719,435
New Brunswick	5,000	23,000	1	5	16,800	6,000	66,610	31,655
Orange	53,000	5,000	2	1	18,375	3,945	89,705	89,642
Passaic	10,500	0	1	0	30,250	64,400	84,490	108,345
Paterson	95,200	53,500	20	12	84,136	130,780	302,582	276,116
Perth Amboy	8,000	12,800	2	3	18,650	10,110	36,925	36,136
Plainfield	79,974	63,000	10	7	112,284	9,200	213,238	97,100
Trenton	32,000	36,800	6	5	39,055	28,325	214,150	86,821
Union City	25,000	0	2	0	59,400	19,200	107,185	33,210
West New York	7,500	0	1	0	750	1,000	32,625	5,800
<b>New York:</b>								
Albany	299,000	293,000	22	25	431,610	79,712	1,204,841	457,724
Amsterdam	42,500	5,000	10	1	2,575	3,675	45,075	8,975
Auburn	9,500	24,200	2	6	8,030	9,280	25,690	36,055
Binghamton	77,400	46,200	19	12	83,736	35,303	250,242	128,190
Buffalo	241,550	278,375	96	80	474,386	747,961	827,110	1,177,016
Elmira	29,050	25,675	7	3	63,601	7,758	106,826	86,097
Jamestown	39,400	48,962	11	12	7,925	40,755	57,200	116,227
Kingston	23,500	17,800	4	3	6,530	3,010	44,185	36,558
Mount Vernon	203,000	95,000	20	10	382,200	58,650	619,145	357,120
Newburgh	18,000	15,000	3	3	7,050	39,062	26,225	60,912
New Rochelle	222,300	138,011	13	9	511,832	134,332	1,054,044	340,473
<b>New York City:</b>								
Bronx <sup>1</sup>	1,758,600	2,708,600	439	612	790,050	825,000	2,903,815	4,402,920
Brooklyn <sup>1</sup>	2,185,500	2,754,800	427	648	1,061,985	5,473,585	4,214,500	9,255,560
Manhattan <sup>1</sup>	2,937,000	2,086,000	566	306	14,529,545	10,415,800	20,619,603	18,126,130
Queens <sup>1</sup>	5,498,700	4,677,610	978	1,305	4,750,506	1,079,806	10,972,187	6,290,969
Richmond <sup>1</sup>	219,700	340,140	51	53	294,109	273,845	588,056	717,295
Niagara Falls	81,600	103,550	18	26	220,370	127,236	332,779	441,820
Poughkeepsie	29,200	48,500	4	6	10,000	4,275	119,625	82,050
Rochester	210,732	155,000	30	29	177,601	264,458	503,609	600,510
Schenectady	277,000	93,300	34	21	2,164,240	92,450	2,512,591	267,450
Syracuse	427,600	242,200	70	43	154,270	154,475	635,245	475,625
Troy	59,800	77,400	10	15	491,950	142,050	572,627	236,720
Utica	28,100	70,000	5	12	43,300	21,260	116,610	111,445
Watertown	17,700	6,500	3	1	8,290	3,985	40,304	37,089
White Plains	193,000	574,700	13	14	663,825	33,250	869,505	770,225
Yonkers	646,700	279,200	49	35	110,610	266,647	819,810	576,212
<b>Pennsylvania:</b>								
Allentown	90,100	108,000	10	10	105,100	24,600	557,375	155,450
Altoona	130,500	67,410	7	13	257,631	76,845	428,256	179,513
Bethlehem	23,500	39,700	3	7	106,000	10,925	146,100	79,070
Butler	20,500	3,500	4	1	2,950	250	25,450	6,150
Chester	31,200	15,100	8	5	19,000	8,525	78,100	45,325
Easton	9,000	0	1	0	3,759	33,840	51,213	80,116
Harrisburg	89,700	59,000	21	4	33,350	46,205	207,500	188,005
Hazleton	37,000	4,500	1	1	20,520	18,622	72,789	35,588
Johnstown	0	20,800	0	4	25,005	97,400	54,510	136,440
Lancaster	0	39,500	0	5	30,425	9,980	108,930	71,285
McKeesport	58,500	70,000	7	13	9,855	125,645	87,918	226,475
New Castle	20,850	50,300	4	7	18,795	4,810	45,400	64,090
Norristown	55,000	43,500	10	4	8,120	37,335	81,886	98,834
Philadelphia	1,066,550	1,033,400	228	175	7,103,625	2,662,325	9,535,800	4,298,190
Pittsburgh	707,650	784,400	121	146	394,530	1,257,825	1,330,201	2,346,482
Scranton	20,255	224,700	6	7	106,885	603,400	191,798	883,468
Wilkes-Barre	8,200	4,000	2	1	60,087	45,664	102,877	80,823
Wilkesburg	36,700	34,500	5	4	31,014	4,040	158,256	72,587
Williamsport	25,000	20,000	2	5	133,818	8,196	192,974	39,951
York	63,900	9,000	16	3	61,043	183,075	176,789	202,656
Total	19,596,971	19,100,288	3,619	3,098	41,511,983	28,976,482	71,672,810	60,048,635
Per cent of change		-2.5		+10.5		-30.2		-16.2

TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED  
IN PRINCIPAL CITIES, APRIL AND MAY, 1930—Continued*East North Central States*

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
<b>Illinois:</b>								
Alton.....	\$17,840	\$42,985	5	12	\$72,295	\$8,255	\$101,834	\$72,375
Aurora.....	45,125	30,760	11	6	11,577	27,877	87,786	73,374
Belleville.....	63,500	86,000	13	20	3,580	33,485	68,030	120,185
Bloomington.....	23,000	25,000	3	6	6,700	6,500	36,700	34,500
Chicago.....	1,543,700	3,394,200	233	414	5,056,050	8,444,200	7,239,470	12,660,957
Cicero.....	45,000	97,300	8	10	11,139	2,924	70,904	117,304
Danville.....	27,100	14,500	6	6	57,003	1,475	85,403	46,975
Decatur.....	61,050	53,450	15	13	21,500	261,950	106,650	326,800
East St. Louis.....	74,950	109,600	24	27	15,500	31,300	96,862	152,540
Elgin.....	52,750	46,100	10	9	8,665	62,180	82,924	125,767
Evanston.....	32,000	153,000	2	6	121,750	38,500	300,750	253,200
Joliet.....	56,200	67,000	8	9	25,500	108,725	203,050	232,425
Moline.....	64,400	45,300	14	9	10,564	123,575	93,708	187,428
Oak Park.....	47,000	35,000	2	3	231,595	5,300	310,070	47,725
Peoria.....	313,750	258,100	81	50	24,750	259,235	364,200	584,570
Quincy.....	16,700	47,050	7	13	2,555	52,329	20,855	106,729
Rockford.....	152,500	104,400	39	29	199,575	455,475	405,375	596,550
Rock Island.....	94,600	72,200	24	20	9,590	5,258	230,546	178,765
Springfield.....	104,700	75,200	25	14	39,073	187,945	192,334	321,355
<b>Indiana:</b>								
Anderson.....	26,500	290,000	9	8	60,000	2,800	86,500	292,800
East Chicago.....	27,705	42,421	6	8	10,615	833,249	54,142	915,707
Elkhart.....	50,900	12,300	9	4	10,660	4,349	76,283	33,414
Evansville.....	94,900	67,050	25	20	67,991	15,400	198,747	100,906
Fort Wayne.....	210,120	212,600	43	41	102,530	130,000	344,776	434,920
Gary.....	64,800	59,850	11	17	17,260	13,460	136,775	98,115
Hammond.....	69,300	60,700	17	14	19,812	60,722	125,483	140,650
Indianapolis.....	345,200	339,300	81	60	238,836	161,101	674,792	611,914
Kokomo.....	4,150	9,900	2	2	56,590	1,295	68,240	33,485
Marion.....	3,450	9,000	3	2	80,750	19,400	92,808	43,475
Muncie.....	24,350	31,400	10	3	8,831	3,480	48,024	48,646
Richmond.....	31,800	26,800	11	8	18,025	20,500	64,935	56,859
Terre Haute.....	33,400	17,300	10	5	30,585	79,645	90,145	103,945
<b>Michigan:</b>								
Bay City.....	28,500	31,200	7	8	310,517	101,325	373,273	243,665
Detroit.....	2,771,700	2,582,274	572	552	1,026,548	1,926,557	4,556,439	5,024,392
Flint.....	268,061	322,530	65	71	150,019	537,541	477,485	917,386
Grand Rapids.....	159,350	89,500	44	24	149,900	252,945	384,370	432,785
Hamtramck.....	22,700	7,000	5	2	3,100	77,165	36,700	107,895
Highland Park.....	0	0	0	0	15,675	19,975	69,385	22,650
Jackson.....	60,800	42,200	13	11	13,304	9,035	179,359	65,276
Kalamazoo.....	83,650	45,500	17	10	84,127	23,899	187,699	95,980
Lansing.....	111,300	75,350	29	18	283,225	33,145	482,285	134,785
Muskegon.....	51,500	30,500	20	10	149,000	106,885	232,674	160,233
Pontiac.....	13,400	22,400	6	6	14,265	9,575	46,655	39,650
Saginaw.....	92,870	67,647	28	25	17,920	136,449	160,262	236,743
<b>Ohio:</b>								
Akron.....	400,000	1,263,280	78	59	73,409	344,641	606,439	1,723,924
Ashtabula.....	4,500	16,800	1	5	83,940	9,370	100,610	32,860
Canton.....	109,000	44,000	20	9	29,720	26,792	185,020	92,052
Cincinnati.....	1,130,027	824,640	207	123	3,064,290	2,856,995	4,387,119	3,835,975
Cleveland.....	1,000,000	736,800	149	148	990,925	757,600	2,868,975	2,211,550
Columbus.....	251,900	182,600	41	32	95,450	52,300	445,100	295,550
Dayton.....	110,762	101,700	24	21	95,326	238,919	351,909	412,343
East Cleveland.....	0	9,000	0	2	11,352	10,640	21,912	21,400
Hamilton.....	42,750	61,150	11	14	51,190	269,081	186,502	362,236
Lakewood.....	155,500	110,300	24	30	84,010	32,050	247,160	147,440
Lima.....	24,800	4,000	2	1	20,895	54,275	74,030	70,485
Lorain.....	64,900	40,300	20	12	12,719	102,265	81,129	151,055
Mansfield.....	39,200	59,850	9	16	11,475	22,030	56,446	98,905
Marion.....	12,300	3,500	4	1	28,970	7,330	42,765	12,530
Portsmouth.....	18,300	21,000	4	6	26,185	3,500	50,380	25,655
Springfield.....	100,500	29,500	15	8	14,145	79,835	133,510	121,780
Steubenville.....	62,500	44,800	12	12	2,325	2,025	79,200	50,275
Toledo.....	286,950	206,900	67	59	546,012	59,720	906,142	382,065
Warren.....	77,770	23,650	18	8	14,545	61,590	104,870	105,090
Youngstown.....	59,900	89,450	14	20	508,654	55,050	617,569	182,640

TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED  
IN PRINCIPAL CITIES, APRIL AND MAY, 1930—Continued*East North Central States—Continued*

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
Wisconsin:								
Fond du Lac.....	\$27,300	\$6,800	8	2	\$37,692	\$2,415	\$70,742	\$21,156
Green Bay.....	70,400	57,000	20	17	108,195	101,390	211,315	177,840
Kenosha.....	76,000	60,000	8	6	45,415	18,150	129,816	103,137
Madison.....	169,400	314,350	41	14	68,880	135,807	306,209	480,227
Milwaukee.....	1,015,050	907,275	267	254	765,101	915,506	2,162,247	2,118,200
Oshkosh.....	26,462	13,700	8	4	45,420	5,370	92,518	46,527
Sheboygan.....	95,100	50,300	17	10	9,535	393,665	132,837	492,466
Superior.....	27,550	18,600	10	7	556,400	5,220	617,899	36,340
Total.....	12,945,092	14,553,112	2,672	2,505	16,266,221	21,319,916	34,616,057	40,447,503
Per cent of change.....		+12.4		-6.3		+31.1		+16.8

*West North Central States*

Iowa:								
Burlington.....	\$4,500	\$18,000	1	3	\$4,950	\$1,700	\$36,460	\$32,900
Cedar Rapids.....	83,250	18,700	20	4	147,800	493,165	290,134	531,953
Council Bluffs.....	12,000	4,000	4	1	62,300	52,000	80,800	99,000
Davenport.....	99,400	143,650	23	26	44,255	79,460	179,917	240,627
Des Moines.....	134,850	61,200	24	14	78,057	189,104	237,041	288,072
Dubuque.....	19,000	29,000	8	8	94,765	10,550	127,693	48,110
Ottumwa.....	30,500	3,000	7	1	23,500	3,150	90,000	6,400
Sioux City.....	1,351,100	61,000	26	16	11,775	94,185	1,396,905	345,570
Waterloo.....	50,600	100,725	20	34	29,325	182,335	99,350	297,030
Kansas:								
Hutchinson.....	65,500	29,300	18	9	884,187	9,605	985,364	42,630
Kansas City.....	51,000	45,100	19	21	192,315	119,505	255,505	174,165
Topeka.....	63,800	28,700	11	9	88,250	310,849	171,855	347,094
Wichita.....	275,825	165,955	99	63	50,400	382,252	378,332	617,968
Minnesota:								
Duluth.....	10,600	25,705	6	7	20,715	24,495	101,790	197,700
Minneapolis.....	752,065	670,345	208	131	221,840	347,005	1,247,495	1,395,125
St. Paul.....	169,260	248,820	45	36	352,756	1,387,928	815,712	1,758,367
Missouri:								
Joplin.....	14,000	28,000	5	3	183,650	125,700	200,300	217,900
Springfield.....	41,475	30,800	18	13	8,025	29,275	213,800	86,350
St. Joseph.....	26,500	21,500	18	6	349,210	15,083	384,985	63,083
St. Louis.....	708,090	769,600	228	159	1,524,685	1,205,620	2,577,845	2,201,856
Nebraska:								
Lincoln.....	119,800	79,350	18	8	35,965	332,150	168,165	416,760
Omaha.....	80,150	129,200	16	16	476,868	299,940	572,493	554,364
South Dakota:								
Sioux Falls.....	253,449	78,250	79	17	66,270	28,185	340,325	130,375
Total.....	4,416,714	2,789,900	921	605	4,957,863	5,723,241	10,952,266	10,093,399
Per cent of change.....		-36.8		-34.3		+15.4		-7.9

*South Atlantic States*

Delaware:								
Wilmington.....	\$196,000	\$99,500	32	15	\$35,255	\$209,100	\$327,514	\$421,151
District of Columbia:								
Washington.....	2,146,100	941,650	242	133	5,383,260	3,437,527	7,774,582	4,860,874
Florida:								
Jacksonville.....	55,800	26,500	22	9	105,180	22,845	226,245	135,730
Miami.....	123,650	37,400	18	10	41,720	67,430	235,149	179,595
St. Petersburg.....	50,000	35,000	12	4	30,000	5,900	114,100	52,500
Tampa.....	8,500	17,650	7	13	21,375	31,561	65,496	80,205



TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED  
IN PRINCIPAL CITIES, APRIL AND MAY, 1930—Continued*South Atlantic States—Continued*

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
Georgia:								
Atlanta.....	\$180,200	\$134,250	64	38	\$464,523	\$40,737	\$867,616	\$301,876
Augusta.....	56,306	21,690	15	8	56,870	17,825	123,457	48,715
Columbus.....	26,500	27,000	7	8	64,105	27,100	96,412	57,930
Macon.....	585	24,875	2	3	13,420	2,050	38,245	74,378
Savannah.....	36,000	26,850	9	4	670	35,800	43,695	82,900
Maryland:								
Baltimore.....	960,000	486,000	203	116	2,935,100	1,698,600	4,605,100	3,026,000
Cumberland.....	11,500	26,500	3	8	550	10,080	18,060	55,270
North Carolina:								
Asheville.....	4,100	13,400	4	2	4,280	11,875	31,615	37,955
Charlotte.....	159,900	185,000	32	55	90,610	193,411	250,510	424,366
Durham.....	135,650	25,700	19	10	4,800	15,000	146,500	49,220
Greensboro.....	11,000	16,500	6	4	4,033	3,316	75,101	62,890
Winston-Salem.....	107,400	51,350	44	11	249,695	52,185	405,205	124,342
South Carolina:								
Charleston.....	9,000	19,168	3	6	13,000	45,150	45,405	78,136
Columbia.....	50,900	57,800	16	13	1,125	20,800	58,450	105,075
Greenville.....	20,000	38,450	6	7	52,070	0	100,865	103,975
Virginia:								
Newport News.....	36,100	39,600	11	13	64,633	151,894	113,519	262,335
Norfolk.....	115,000	102,386	35	25	8,095	41,240	145,140	158,155
Petersburg.....	21,800	42,100	5	7	535	835	23,135	50,675
Portsmouth.....	69,500	10,050	27	3	1,735	2,265	80,135	30,745
Richmond.....	87,500	90,200	18	22	141,127	102,948	285,953	337,298
Roanoke.....	27,450	91,135	8	20	250,638	75,357	301,290	214,932
West Virginia:								
Clarksburg.....	14,800	800	4	1	3,370	33,180	31,495	40,530
Huntington.....	13,300	40,500	5	3	2,700	2,100	33,000	46,200
Wheeling.....	29,000	28,500	7	4	65,730	9,237	122,200	182,736
Total.....	4,763,541	2,757,504	886	575	10,110,204	6,367,348	16,785,189	11,686,689
Per cent of change.....		-42.1		-35.1		-37.0		-30.4

*South Central States*

Alabama:								
Mobile.....	\$57,350	\$44,150	22	17	\$2,950	\$179,415	\$78,786	\$241,275
Montgomery.....	80,950	52,700	28	23	12,375	7,475	117,033	84,435
Arkansas:								
Little Rock.....	98,800	52,625	33	18	21,008	18,580	253,884	149,641
Kentucky:								
Covington.....	23,000	16,000	15	19	80,000	20,650	103,000	36,650
Lexington.....	23,200	17,550	9	10	39,640	37,010	101,259	73,145
Louisville.....	343,500	219,250	69	39	313,700	1,963,975	743,780	2,270,800
Newport.....	38,500	9,000	11	2	9,300	29,650	55,350	42,450
Paducah.....	19,030	16,800	16	11	69,225	2,750	88,335	20,650
Louisiana:								
Baton Rouge.....	36,339	15,210	8	5	33,370	63,730	81,994	93,128
New Orleans.....	76,300	111,900	22	24	88,067	26,380	283,083	237,615
Shreveport.....	31,437	53,832	18	18	46,383	9,667	121,915	112,914
Oklahoma:								
Muskogee.....	15,000	10,300	4	6	12,710	3,020	32,560	18,185
Oklahoma City.....	526,825	539,300	191	107	935,520	1,674,116	1,684,988	2,344,366
Okmulgee.....	0	0	0	0	0	350	1,200	950
Tulsa.....	517,250	357,675	131	80	119,925	418,360	664,476	835,840
Tennessee:								
Knoxville.....	130,254	64,560	47	20	54,515	124,613	220,800	205,749
Memphis.....	481,950	485,550	126	181	1,749,150	282,160	2,565,200	1,011,010
Nashville.....	102,000	112,675	35	33	317,640	1,521,970	477,969	1,657,443

TABLE 4.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, APRIL AND MAY, 1930—Continued

## South Central States—Continued

State and city	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in dwellings		Estimated cost		Estimated cost	
	April	May	April	May	April	May	April	May
<b>Texas:</b>								
Austin.....	\$113,830	\$91,358	36	42	\$20,754	\$656,789	\$168,389	\$771,964
Beaumont.....	60,275	67,450	23	24	18,216	34,785	132,716	143,625
Dallas.....	278,100	195,425	124	83	472,885	243,423	1,021,304	560,272
Fort Worth.....	277,195	157,150	65	45	439,898	400,921	843,298	638,835
Galveston.....	40,500	70,900	9	12	12,707	116,575	82,658	208,699
Houston.....	1,063,600	705,105	189	151	1,707,525	372,735	2,800,746	1,099,630
Port Arthur.....	65,870	42,700	25	19	819,006	79,930	901,351	146,614
San Antonio.....	197,750	282,420	86	109	93,325	926,315	370,105	1,268,685
Waco.....	69,080	22,067	18	8	93,388	4,133	189,473	37,034
Wichita Falls.....	1,800	9,200	1	1	22,000	400	117,130	84,816
<b>Total.....</b>	<b>4,769,685</b>	<b>3,822,852</b>	<b>1,361</b>	<b>1,107</b>	<b>7,605,182</b>	<b>9,239,817</b>	<b>14,302,782</b>	<b>14,396,420</b>
<b>Per cent of change.....</b>		<b>-19.9</b>		<b>-18.7</b>		<b>+21.5</b>		<b>+0.7</b>

## Mountain and Pacific States

<b>Arizona:</b>								
Phoenix.....	\$86,300	\$171,200	45	65	\$659,590	\$70,745	\$783,860	\$274,770
Tucson.....	23,600	114,400	12	30	21,940	25,750	69,016	242,907
<b>California:</b>								
Alameda.....	72,400	24,900	28	7	89,890	3,316	181,113	44,919
Berkeley.....	246,750	210,031	65	45	18,895	6,260	304,352	288,873
Fresno.....	61,450	32,150	12	7	21,955	10,096	123,779	78,681
Long Beach.....	588,000	557,750	176	161	309,485	630,865	1,049,945	1,263,370
Los Angeles.....	3,193,890	4,216,009	1,133	1,321	2,633,485	1,977,024	7,026,972	7,141,950
Oakland.....	356,450	511,800	117	86	476,287	207,455	920,394	840,396
Pasadena.....	163,625	212,850	39	20	126,350	53,753	352,720	436,084
Sacramento.....	125,350	113,507	39	38	283,701	128,090	452,011	275,516
San Diego.....	410,850	305,450	94	104	105,360	290,230	572,175	637,570
San Francisco.....	715,076	1,159,485	192	199	181,504	1,391,957	1,324,998	2,857,238
San Jose.....	496,715	79,960	43	14	46,320	120,750	593,735	222,520
Stockton.....	14,550	62,800	5	28	211,010	58,800	232,970	175,600
<b>Colorado:</b>								
Colorado Springs.....	13,550	24,050	4	6	5,545	27,140	37,420	64,675
Denver.....	315,100	129,650	34	34	66,300	419,300	552,800	704,100
Pueblo.....	19,650	17,700	6	10	70,010	9,950	116,097	46,225
<b>Oregon:</b>								
Portland.....	365,275	380,615	95	101	370,570	259,565	970,555	860,995
<b>Utah:</b>								
Ogden.....	43,100	23,750	13	10	76,500	5,810	140,350	34,060
Salt Lake City.....	276,450	226,650	93	66	68,445	113,641	367,070	416,946
<b>Washington:</b>								
Bellingham.....	46,350	17,600	17	7	60,575	66,275	121,955	95,550
Everett.....	16,300	7,800	7	6	22,495	143,890	50,375	175,650
Seattle.....	1,244,630	1,359,900	206	234	647,920	1,244,575	2,111,845	2,776,320
Spokane.....	113,350	163,975	37	42	57,948	92,550	217,918	300,260
Tacoma.....	243,000	65,000	72	24	380,820	31,635	647,255	151,305
<b>Total.....</b>	<b>9,251,761</b>	<b>10,194,982</b>	<b>2,584</b>	<b>2,663</b>	<b>7,071,900</b>	<b>7,389,422</b>	<b>19,330,680</b>	<b>20,406,480</b>
<b>Per cent of change.....</b>		<b>+10.2</b>		<b>+3.1</b>		<b>+4.5</b>		<b>+5.6</b>

## Hawaii

Honolulu.....	\$230,050	\$193,237	87	74	\$101,673	\$1,007,441	\$417,975	\$1,219,906
<b>Per cent of change.....</b>		<b>-16.0</b>		<b>-15.0</b>		<b>+890.9</b>		<b>+191.9</b>

## Nonresidential Building in Large Cities, 1921 to 1929

THE Bureau of Labor Statistics of the United States Department of Labor since 1921 has been collecting data concerning building permits issued in the cities of the United States having a population of 25,000 and over. Compilations of such figures have been published in detail in bulletins of the bureau and in articles in the Monthly Labor Review. The following tables show the total amount of money spent in the 9-year period, 1921 to 1929, for each of the more important classes of nonresidential building and the percentage each kind forms of the total expenditure for building operations in the cities of the United States having a population of 500,000 or over. For purposes of comparison the figures for residential construction are also given. The 9-year period is sufficiently broad to smooth out the peculiar conditions of any one year and to present a normal ratio as between the different kinds of buildings.

ESTIMATED EXPENDITURES AND PER CENT OF ESTIMATED EXPENDITURES FOR BUILDING OPERATIONS IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 500,000 OR OVER, BY CLASS OF BUILDING AND BY CITIES, NINE YEARS, 1921-1929

Class of building	Baltimore		Boston		Buffalo	
	Estimated cost	Per cent of total	Estimated cost	Per cent of total	Estimated cost	Per cent of total
Total construction (including repairs)	\$346,550,099		\$467,985,077		\$239,599,258	
New residential	156,935,380	45.3	197,158,541	42.1	111,176,897	46.4
New nonresidential:						
Commercial <sup>1</sup>	62,433,514	18.0	112,507,872	24.0	50,430,021	21.0
Amusement	2,158,750	.6	8,272,800	1.8	6,632,500	2.8
Churches	6,870,900	2.0	3,910,790	.8	5,970,550	2.5
Schools and libraries	22,034,894	6.3	14,843,700	3.2	12,518,724	5.2
Public <sup>2</sup>	15,253,636	4.4	33,149,076	7.1	21,326,171	8.9
Miscellaneous nonresidential <sup>3</sup>	16,175,220	4.7	15,151,871	3.2	9,757,412	4.1
Additions, alterations, and repairs	64,687,805	18.7	82,990,427	17.7	21,786,983	9.1
Class of building	Chicago		Cleveland		Detroit	
	Estimated cost	Per cent of total	Estimated cost	Per cent of total	Estimated cost	Per cent of total
Total construction (including repairs)	\$2,655,940,379		\$505,575,158		\$1,181,265,600	
New residential	1,635,489,750	61.6	231,756,900	45.8	695,652,185	58.9
New nonresidential:						
Commercial <sup>1</sup>	578,999,463	22.1	108,106,544	21.4	232,528,432	19.7
Amusement	60,443,700	2.3	11,916,000	2.4	25,468,966	2.2
Churches	40,270,300	1.4	6,645,000	1.2	15,594,940	1.3
Schools and libraries	110,208,400	4.1	23,033,900	4.6	41,813,973	3.5
Public <sup>2</sup>	87,197,745	3.3	33,116,400	6.6	14,116,928	1.2
Miscellaneous nonresidential <sup>3</sup>	41,852,358	1.5	18,029,001	3.6	40,659,420	3.4
Additions, alterations, and repairs	101,478,663	3.7	72,971,413	14.4	115,370,756	9.8
Class of building	Los Angeles		Milwaukee		New York City	
	Estimated cost	Per cent of total	Estimated cost	Per cent of total	Estimated cost	Per cent of total
Total construction (including repairs)	\$1,147,627,588		\$292,502,370		\$7,513,348,392	
New residential	640,002,961	55.8	156,838,730	53.6	4,915,575,823	65.4
New nonresidential:						
Commercial <sup>1</sup>	209,540,167	18.3	45,694,679	15.6	1,346,851,847	17.9
Amusement	39,489,642	3.4	8,237,253	2.8	198,656,961	2.6
Churches	13,718,228	1.2	3,226,468	1.1	57,330,850	.8
Schools and libraries	28,919,128	3.4	12,204,141	4.2	220,868,470	2.9
Public <sup>2</sup>	37,784,012	3.3	15,153,922	5.2	154,306,938	2.1
Miscellaneous nonresidential <sup>3</sup>	36,830,837	3.2	13,504,650	4.6	98,712,520	1.3
Additions, alterations, and repairs	131,342,613	11.4	37,642,517	12.9	521,044,973	6.9

See footnotes at end of table.



ESTIMATED EXPENDITURES AND PER CENT OF ESTIMATED EXPENDITURES FOR BUILDING OPERATIONS IN CITIES OF THE UNITED STATES HAVING A POPULATION OF 500,000 OR OVER, BY CLASS OF BUILDING AND BY CITIES, NINE YEARS, 1921-1929—Continued

Class of building	Philadelphia		Pittsburgh		St. Louis	
	Estimated cost	Per cent of total	Estimated cost	Per cent of total	Estimated cost	Per cent of total
Total construction (including repairs)	\$1,071,120,945		\$328,315,643		\$329,715,894	
New residential	489,474,600	45.7	150,514,720	45.8	161,332,921	48.9
New nonresidential:						
Commercial <sup>1</sup>	255,039,827	23.8	61,600,791	18.8	66,578,527	20.2
Amusement	30,449,975	2.8	8,954,639	2.7	10,898,624	3.3
Churches	14,906,995	1.4	5,722,720	1.7	4,245,900	1.3
Schools and libraries	65,921,505	6.2	13,643,272	4.2	10,819,781	3.3
Public <sup>2</sup>	45,210,080	4.2	23,035,199	7.0	15,751,300	4.8
Miscellaneous nonresidential <sup>3</sup>	34,700,153	3.2	13,808,962	4.2	11,755,206	3.6
Additions, alterations, and repairs	135,417,810	12.7	51,235,340	15.6	48,333,635	14.6
	San Francisco		Washington		Total of 14 cities	
Total construction (including repairs)	\$395,440,656		\$455,373,909		\$16,930,300,968	
New residential	225,099,080	56.9	288,903,104	63.4	10,055,711,592	59.4
New nonresidential:						
Commercial <sup>1</sup>	71,253,679	18.0	60,863,391	13.4	3,262,428,754	19.3
Amusement	8,153,361	2.1	5,090,484	1.1	424,823,655	2.5
Churches	2,453,270	.6	8,958,997	2.0	189,825,908	1.1
Schools and libraries	18,440,710	4.7	18,379,079	4.0	623,649,677	3.7
Public <sup>2</sup>	18,645,380	4.7	27,372,532	6.0	541,419,329	3.2
Miscellaneous nonresidential <sup>3</sup>	1,996,213	.5	10,669,588	2.4	363,603,421	2.1
Additions, alterations, and repairs	49,398,963	12.5	35,136,734	7.7	1,468,838,632	8.7

<sup>1</sup> Includes factories, shops, garages (public), gasoline and service stations, office buildings, and stores and warehouses.

<sup>2</sup> Includes public buildings, public works and utilities, and institutions.

<sup>3</sup> Includes garages (private), sheds, stables and barns, and all others not included in other classes.

In the 14 cities of the United States having a population of 500,000 or over, \$16,930,300,968 was spent for building operations in the 9-year period ending December 31, 1929, as indicated by the building permits issued. From this staggering amount the importance of the building industry in the economic life of the country will be readily recognized. Of the above sum, 59.4 per cent was spent for new residential buildings. Commercial buildings, including factories, shops, office buildings, stores, etc., accounted for a larger proportion (19.3 per cent) than any of the other classes of nonresidential buildings.

Educational and recreational buildings, composed of theaters and other amusement buildings, churches, schools, and libraries, accounted for 7.3 per cent of the total building expenditure in these cities. Of the amount expended for cultural buildings, schoolhouses accounted for the largest part, followed by amusement buildings and churches, in the order named. Public buildings—buildings built from public funds of the Federal Government, State, county, or city—accounted for only 3.2 per cent of the total outlay for building operations in these nine years.

In all 14 of the cities the expenditure for new residential buildings exceeded that for new nonresidential buildings, while in seven the expenditure for residential buildings exceeded that for new nonresidential buildings and repairs combined. New York City showed a

larger proportion of total expenditure for residential buildings than any of the other cities in this group. This was accounted for by the many large hotels erected in the Borough of Manhattan, several huge hostelrys being erected in this borough costing from \$1,000,000 to over \$5,000,000 apiece. The city of Buffalo expended a higher proportion of its total building expenditures for new nonresidential buildings than any of the other cities, 44.5 per cent of the expenditure for building operations in this city being spent for this class of structure.

Boston spent a larger proportion of its funds for commercial building than any of the other cities, 24 per cent of the total being so spent.

In Washington only 13.4 per cent of the total cost of building operations was expended for this class of structure, this being the smallest proportion expended in any of the cities for commercial buildings. Los Angeles ranked first in the erection of amusement buildings and Baltimore ranked last. As regards expenditure for churches, Buffalo led with 2.5 per cent of the total, while San Francisco spent only six-tenths of 1 per cent. In the erection of school buildings Baltimore led the rest of the cities with 6.3 per cent expended for educational edifices. New York City was last, with only 2.9 per cent. In the expenditures for public buildings Buffalo led the other cities with an expenditure of 8.9 per cent, while Detroit ranked last with an expenditure of only 1.2 per cent. In only two cities did the expenditure for educational and recreational buildings form as much as 10 per cent of the cost of all building operations. In the city of Buffalo 10.5 per cent of the total estimated building cost went for this class of building and in Philadelphia 10.4 per cent.

Of the total expenditures in these 14 cities, New York accounted for nearly 50 per cent. Over seven and one-half billion dollars was spent in the five boroughs of New York for the construction of buildings in this 9-year period. Of this amount, nearly \$5,000,000,000 was spent for residential buildings and over one and one-quarter billions of dollars was spent for commercial buildings.

Chicago, Detroit, Los Angeles, and Philadelphia were the only other cities where the building permits issued in these nine years accounted for an expenditure of over \$1,000,000,000. The expenditure in Chicago was over two and one-half billion dollars; in the other three cities less than one and one-half billion.

Educational and recreational buildings accounted for an expenditure of less than commercial buildings in each of the 14 cities.

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### Report of New York State Board of Housing

**I**N ITS annual report to the Governor and Legislature of New York, the State board of housing gives some discussion as to the kind of housing which it will approve for the benefits of the State housing law. In the postwar housing emergency, ill-constructed and badly-planned buildings were put up without reference to future conditions, designed only to get the advantage of the current high rents. As the housing situation has become easier, these buildings have tended to be more and more deserted in favor of the better structures since erected, and



as the owners can not, if they would, keep up the repairs, the properties are deteriorating and represent not only a loss but a danger to the community. To prevent further developments of this kind, the board has decided that it will not approve projects unless they show a superiority to available housing and are of such a kind that there is no likelihood of their becoming substandard within a short time. Large-scale projects are encouraged as being not only cheaper but better, and the reservation of adequate spaces between buildings for gardens and playgrounds is insisted on. The question of adequate ventilation is given primary consideration, and cross ventilation is strongly favored.

A more radical departure is in regard to the use of elevators. Not many years ago, it is pointed out, walk-up tenements six and even seven stories high were considered perfectly proper for persons of limited means, but at present the tendency is distinctly away from buildings of over four, or at most five, stories unless elevators are installed. The board has therefore engaged in a study of elevator costs as applied to projects coming under its supervision. As long as elevators required individual operators they were too expensive a luxury for low-rent apartments, but the introduction of the automatic elevator has so changed the situation that such service has practically stepped out of the luxury class and is rapidly becoming a common adjunct of the modern apartment house. The cost varies with the number of rooms served. Among the completed projects under the State housing law are two which represent the extremes of elevator service, the first having approximately 100, while the second has over 220 rooms per elevator. In these two projects the added cost involved in providing automatic elevator service ranges from 50 cents to about \$1.13 per room per month. At present the board will not approve 6-story walk-up project, nor a 5-story one unless it is so arranged that the apartments of the top story are let at a lower rent than the others. For a walk-up apartment there is a tendency to set four stories as the standard. A 6-story building, however, since it permits a larger number of rooms on the same ground area, is cheaper, and will be approved if it is provided with automatic elevators. As between a 4-story walk-up and a 6-story automatic elevator structure, with the same coverage of ground, and with an elevator serving 100 rooms, the net difference in the rent per room is in favor of the elevator structure if the cost of the ground is \$5 or more per square foot; as compared with a 5-story walk-up, the 6-story elevator building is a little more expensive, but the difference is small.

Assuming 160 rooms as a normal burden per elevator in a 6-story structure, we may generalize that on land costing \$5 per square foot the additional rent the tenant must pay in a nonfireproof 6-story elevator building, as compared with a similar 5-story walk-up, is only about \$0.18 per room per month. Similarly, on land valued at \$3 per square foot the added rent is only \$0.34 per room per month.

### Present Housing Situation in New York City

SINCE the legislature in 1920 declared the existence of a public emergency with respect to housing, the situation has wholly changed.

In the year 1921 only 309 tenements, containing 4,199 new apartment suites, were erected in the entire city. Of the total housing in the city only 0.0015 [per cent] was vacant, as against a normal vacancy in pre-war years of 5 per cent.



Since that time more than 24,000 multifamily buildings have been erected, containing more than 425,000 apartments. The net increase in the number of apartments in all dwellings erected during the period amounts to more than 600,000. This increase in the physical supply of housing was more than sufficient to meet the demands of increasing population. It brought an end to the housing shortage. The increase in the volume of dwelling space in New York City has resulted in the partial abandonment of some of the worst housing. A year ago the board recorded more than 100,000 vacancies—7.76 per cent of the total number of apartments in the city.

Approximately half of all the vacant apartments are in old tenements. Approximately 60 per cent of all the vacancies in the city rent for less than \$10 per room per month, and of these approximately 80 per cent are in the old-law tenements. About 11 per cent of the vacancies are offered at rentals below \$5 per room per month.

In spite of the vacancies, some of the worst of the old-law tenements are still occupied. A recent investigation in the East Side showed 433 rear houses, with a minimum of light and ventilation, providing "the lowest type of shelter in the city," which nevertheless are the homes of 1,955 families, composing a population of 10,000 men, women, and children. In some cases, the tenant of these houses pays no rent at all—73 free tenements were found—and in others rents are far below those prevailing throughout the city.

The report contains a discussion of the fire hazard in the outer portions of the city where mass production of frame houses has developed, considers the difficulties in the way of enforcing the tenement-house law, and contains a list of proposed amendments to the State housing law, which have been developed on the basis of the board's experience.

### State-Assisted Housing in Scotland<sup>1</sup>

THE first act providing for State aid to housing in Scotland was passed in 1919, but hardly became operative until the beginning of 1920. The close of 1929, therefore, saw the completion of a decade of State-assisted housing efforts, and the Scottish Department of Health, in its first annual report, gives a summary of what has been accomplished in that time. The housing difficulty, it finds, has by no means been solved.

To December 31, 1929, 106,297 working-class houses have been completed with assistance under one or other of the acts that have been passed, and on a conservative estimate these 106,297 houses accommodate some 478,000 persons, representing at least one-ninth of the working-class population of Scotland. In other words, one person out of every nine of the working classes is now living in a house built with State assistance. Viewed in this light the effort of the State and local authorities over a decade has been no mean one. The demand for more houses, however, is no less insistent to-day than it was 10 years ago. This naturally prompts the question, what still remains to be done? No recent data are available for a precise answer, but if the local authorities' estimate in 1919 of a shortage of 131,000 houses is taken and due allowance made for normal wastage, increase in population, and the number of working-class houses—both assisted and unassisted—built in the interval, over 100,000 houses are still required before the housing conditions of Scotland can be regarded as reasonably satisfactory.

At the present, some 20,000 houses are being erected each year, of which about half go to make up the shortage; therefore, unless the

<sup>1</sup> Scotland. Department of Health for Scotland. First annual report, 1929. Edinburgh, 1930. (Cmd. 3529.)

rate of building is increased, it will take at least another decade to catch up. Unfortunately, for the last two years the rate of building has fallen below this standard, having been 17,772 in 1928 (exclusive of some steel houses built by the Government) and 18,240 in 1929. The failure to reach 20,000 in 1929 is considered to be in part due to the legislative situation. In December, 1928, an act was passed reducing the rates of subsidy, to become operative in the following September. (See Labor Review, September, 1929, p. 108.) Upon the coming into power of the Labor Party in July, this act was repealed so that the reduction never took effect, but it is estimated that the prospect of it deterred some local authorities from undertaking housing schemes. After the repeal of the act there was a prospect of new legislation concerning housing, and the chance that this might give more liberal terms than those existing operated to make authorities postpone building.

#### State-Assisted Houses Completed and under Construction, 1919-1929

THE following table shows the total number of houses completed under each of the State-assisted schemes from 1919 to December 31, 1929, and the number under construction at the latter date:

NUMBER OF HOUSES COMPLETED AND IN COURSE OF CONSTRUCTION, 1919 TO END OF 1929

	Houses completed	Houses under construction
1919 act:		
Local authorities' schemes	25, 129	
Public utility society schemes	421	
Private builders' schemes	2, 324	
1923 act:		
Local authorities' schemes	4, 028	2
Local authorities' slum-clearance schemes	11, 022	1, 782
Private enterprise assisted schemes	17, 574	1, 243
1924 act:		
Local authorities' schemes	41, 672	5, 200
Private enterprise assisted schemes	1, 558	1, 498
Demonstration steel houses	17	
Government steel housing schemes	2, 552	
Total	106, 297	9, 725

The amount paid out in Government subsidies to housing schemes during 1929 was £1,695,566 (\$8,252,320). The grand total paid out in assistance to such schemes from the beginning of the program of subsidies to December 31, 1929, was as follows:

#### Amount of housing subsidies, 1919 to December 31, 1929

Housing act of 1919	£7, 620, 227	(\$37, 087, 645)
Housing (additional powers) act, 1919	550, 297	(\$2, 678, 295)
Housing act, 1923	570, 745	(\$2, 777, 816)
Housing act, 1924	704, 668	(\$3, 429, 619)
Housing (rural workers) act, 1926	3, 579	(\$17, 419)
Demonstration steel houses of local authorities	3, 500	(\$17, 035)
Total	9, 453, 016	(\$46, 007, 829)

In addition the sum of £1,038,688 (\$5,055,294) has been advanced to the second Scottish National Housing Co.—Housing Trust (Ltd.)—in respect of the erection on behalf of the Government of 2,552 steel houses.

### Need for Continuance of State Assistance

AS STATED above, it is estimated that there is still a shortage of at least 100,000 working-class houses in Scotland. The authorities feel that it is hopeless to expect that this will be made up by unassisted private enterprise.

The number of working-class houses provided since 1919 by unassisted private enterprise as shown in returns made by local authorities is only 11,749, an average of 1,175 a year. Obviously there will have to be a radical change in the economics of building before any substantial assistance in reducing the housing shortage can come from this quarter. The total number returned as built in 1929 is 1,275, of which 917 were of five apartments and less. The corresponding figures for 1928 were 2,147 and 1,703.

In the conditions which have prevailed since the war, building can be conducted only at a loss, so that private enterprise is naturally not interested in the proposition unless assistance is provided. In a number of cases the local authorities share the reluctance to embark upon an enterprise which can not afford a profit, even with the aid of the Government subsidy, and the department finds it necessary to bring pressure to bear to induce them to undertake urgently needed housing schemes. Fortunately the last four years have seen an annual fall in building prices; in 1929 the average price for a 2-room flat had fallen by £26 (\$127) as compared with 1928, 3-room flats showed a decrease of £33 (\$161), and 3-room cottages of £32 10s. (\$158). Local authorities can aid in securing a continuance of this movement, the department feels, by adopting a steady and continuous building program.



# INDUSTRIAL DISPUTES

## Strikes and Lockouts in the United States in May, 1930

DATA regarding industrial disputes in the United States for May, 1930, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, and 1929, number of workers involved and man-days lost for these years, the number of industrial disputes for each of the months—January, 1928, to May, 1930, inclusive—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1928 TO MAY, 1930, AND TOTAL NUMBER OF DISPUTES, WORKERS AND MAN-DAYS LOST IN THE YEARS 1927, 1928, AND 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
Total, 1927	734		349,434		37,799,394
Total, 1928	629		357,145		31,556,947
Total, 1929	903		230,463		9,975,213
1928					
January	48	63	18,850	81,880	2,128,028
February	52	58	33,441	103,496	2,145,342
March	41	47	7,459	76,069	2,291,337
April	71	48	143,760	129,708	4,806,232
May	80	56	15,640	133,546	3,455,499
June	44	46	31,381	143,137	3,670,878
July	54	42	18,012	132,187	3,337,386
August	59	42	8,887	105,760	3,553,750
September	52	34	8,897	62,862	2,571,982
October	61	42	27,866	41,474	1,394,913
November	44	38	37,840	38,745	1,300,362
December	23	29	5,172	35,842	991,238
1929					
January	48	36	14,783	39,569	951,914
February	54	35	22,858	40,366	926,679
March	77	37	14,031	40,516	1,074,468
April	117	53	32,989	52,445	1,429,437
May	115	73	13,668	64,853	1,727,694
June	73	57	19,989	58,152	1,627,565
July	80	53	36,152	15,589	1,062,428
August	78	43	25,616	6,714	358,148
September	98	49	20,233	8,132	244,864
October	69	31	16,315	6,135	272,018
November	61	32	10,443	6,067	204,457
December	33	21	3,386	2,343	95,541
1930					
January	42	21	8,879	5,316	182,202
February	44	33	37,301	6,562	436,788
March	49	34	15,017	5,847	289,470
April <sup>1</sup>	60	44	7,295	7,319	203,973
May <sup>1</sup>	57	38	7,092	5,594	284,656

<sup>1</sup> Preliminary figures, subject to change.

## Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in March, April, and May, 1930, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN MARCH, APRIL, AND MAY, 1930

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	March	April	May	March	April	May
Auto, carriage, and wagon workers.....		2			270	
Bakers.....			2			47
Barbers.....	1		2	48		730
Brick and tile workers.....		1			85	
Building trades.....	14	21	29	9,730	2,093	3,079
Car builders.....		1	1		80	30
Chauffeurs and teamsters.....	3	4	10	92	150	2,387
Clothing.....	9	3	5	2,394	37	250
Food workers.....	1	1		13	140	
Furniture.....	3	1		62	53	
Hotel and restaurant employees.....	1	1		20	7	
Iron and steel.....		1			500	
Leather.....	1			44		
Longshoremen.....		3			378	
Lumber and timber.....			1			36
Metal trades.....		3	1		133	50
Miners.....	4	6	1	1,303	1,621	700
Paper and paper goods workers.....	1			23		
Stone.....		2	1		85	200
Street-railway workers.....	1			645		
Textiles.....	8	7	4	368	1,369	183
Other occupations.....	2	3		275	296	
Total.....	49	60	57	15,017	7,295	7,692

## Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in May, 1930, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN MAY, 1930, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in May, 1930 involving—			
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers
Bakers.....	1	1		
Barbers.....		1		1
Building trades.....	6	14	8	1
Car builders.....		1		
Chauffeurs and teamsters.....	2	3	3	2
Clothing.....		4	1	
Lumber.....		1		
Metal trades.....		1		
Miners.....				1
Stone.....			1	
Textiles.....	1	2	1	
Total.....	10	28	14	5

In Table 4 are shown the number of industrial disputes ending in May, 1930, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN MAY, 1930, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in May					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	4 months and less than 5 months
Bakers.....	2					
Barbers.....	1					
Building trades.....	20	2	6	1		
Car builders.....	2					
Chauffeurs and teamsters.....	6	2				1
Clothing.....	2	2	1	1		
Furniture.....				1		
Hotel and restaurant workers.....				2		
Longshoremen.....			1			
Metal trades.....		3				
Miners.....		2				
Stone.....	1					
Textiles.....	2		1		1	
Total.....	36	11	9	5	1	1

#### Principal Strikes and Lockouts Beginning in May, 1930

*Teamsters and chauffeurs, New York City.*—Demanding a wage increase of \$1 per day (from \$7 to \$8 and from \$8 to \$9) and an extra helper on trucks hauling more than 3,000 bricks, 400 teamsters and chauffeurs, hauling building material, struck on May 1. This strike, it is understood, ended successfully on May 9.

*Teamsters and chauffeurs, Pennsylvania.*—Approximately 700 excavating chauffeurs employed by contractors in Philadelphia and vicinity struck on May 5 to enforce demands for shorter hours (55 per week, instead of 11 to 16 hours per day), wage increases to \$35 per week, instead of \$3.75 to \$5 per day, etc. This strike ended on May 31, being partly successful, a wage increase of \$2.50 per week being allowed.

*Taxicab drivers, New York City.*—The motor cab transportation system in Brooklyn was affected by a strike of drivers which began on May 6 when, according to press reports, some 800 drivers employed by the Black Beauty Cab Corp. went out in protest against the discharge of dispatchers and managers at two of the garages.

The strike is understood to have ended on May 19 with the acceptance by the strikers of the company's terms, which included: Organization of an independent association by the drivers; installation of a weekly wage system; installation of shop stewards; increase in the number of mechanics in the garages; and group insurance at the expense of the company.

*Barbers, New York City.*—A successful strike of 700 barbers for certain concessions including union recognition, 3 holidays (Christmas, New Year, and Labor Day) annually with pay, a lunch period of 1½ hours, and Saturday closing at 9 p. m., began on May 19 and ended, it is understood, on May 24.



### Principal Strikes and Lockouts Continuing into May, 1930

NONE of the strikes commented upon in previous issues of the Labor Review remained in effect, the strike of taxicab drivers in Pittsburgh having ended on May 15, as previously noted.

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### Conciliation Work of the Department of Labor in May, 1930

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 60 labor disputes during May, 1930. These disputes affected a known total of 29,140 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On June 1, 1930, there were 47 strikes before the department for settlement and in addition 26 controversies which had not reached the strike stage. The total number of cases pending was 71.

## LABOR DISPUTES HANDLED DURING THE MONTH OF MAY, 1930

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Plumbers and steam fitters, Dayton, Ohio.	Strike.	Plumbers and steam fitters.	Asked 5-day week.	Adjusted. Allowed 5-day week and last year's agreement on wages.	1930 May 1	1930 May 6	265	---
Truck drivers, Dayton, Ohio.	do.	Truck drivers.	Asked union recognition.	Adjusted. Agreed to settle all future differences in conference.	Apr. 26	May 15	180	---
Sheet-metal workers, Dayton, Ohio.	Threatened strike.	Sheet-metal workers.	Wages.	Adjusted. Accepted last year's wages and agreement.	May 1	May 1	125	---
Iron workers, Dayton, Ohio.	do.	Iron workers.	do.	Adjusted. Extended present agreement for 1 year.	Apr. 15	Apr. 30	85	---
Pink Construction Co., Dayton, Ohio.	Strike.	Engineers.	Wages and working conditions.	Adjusted. Working conditions.	May 1	May 9	4	---
Rich-Vogel Shoe Co., Milwaukee, Wis.	do.	Shoe cutters.	Alleged discrimination.	Pending.	Feb. 13	---	35	215
Gullett Flower Co., Lincoln, Ill.	do.	Florists and gardeners.	Working conditions; discharges.	do.	Apr. 21	---	105	---
Plumbers, Paterson, N. J.	do.	Plumbers.	Asked 5-day week and wage increase.	Adjusted. Allowed as asked; 1-year agreement.	May 1	May 9	262	13
Carpenters, Morristown and Summit, N. J.	do.	Carpenters.	Asked 5-day week.	Pending.	do.	---	500	---
Plumbers and steam fitters, Erie, Pa.	do.	Plumbers and steam fitters.	Asked 5-day week and double time for Saturday.	Adjusted. Allowed 5-day week; time and a half for Saturday.	do.	May 3	50	70
Painters, Erie, Pa.	do.	Painters.	Asked 5-day week with same wages.	Adjusted. Allowed 5-day week and 5 per cent wage increase.	do.	May 12	120	40
Carpenters, Erie, Pa.	Threatened strike.	Carpenters.	Asked 5-day week and \$1.25 per hour.	Adjusted. Allowed 5-day week; wages under negotiation.	do.	May 10	400	100
Plumbers, Terre Haute, Ind.	Strike.	Plumbers.	Asked 5-day week and \$1.37 per hour.	Unable to adjust.	do.	May 22	32	---
Evans Colliery, Beaver Meadow, Pa.	do.	Miners.	Three miners laid off.	Adjusted. One man reinstated; other two will be reinstated later.	Apr. 14	May 5	224	---
Black Beauty Cab Corporation, Brooklyn, N. Y.	do.	Drivers.	Protest discharge of manager.	Adjusted. Drivers returned, protesting replacement of manager.	May 1	May 1	400	42
do.	do.	do.	Protest against discharges; also cut in commissions.	Adjusted. Returned; no cut in commissions.	May 6	May 19	800	158
Cement finishers.	do.	Cement finishers.	Renewal of agreement.	Adjusted. Agreement signed at 1929 rates.	Apr. 15	May 5	55	---
Davis-Alcock Hosiery Co., Gadsden, Ala.	Threatened strike.	Hosiery workers.	Alleged discrimination for union affiliation.	Adjusted. Company agreed not to discriminate.	May 1	May 14	26	1,174
Board of Trade Building, Chicago, Ill.	Controversy.	Sheet-metal workers.	Jurisdiction of sheet-metal work.	Adjusted. Returned pending decision of arbitration board.	May 7	May 9	25	---
Teamsters for building materials, New York City.	Strike.	Teamsters.	Asked wage increase; working conditions.	Pending.	May 1	---	400	500

Unclassified. Settled by parties before arrival of commissioner.	Feb. 1	May 18	---
Pending.	Apr. 28	---	70
Union dispute and working conditions.	---	---	44
Miners.	---	---	---
do.	---	---	---
Peoria, Ill.	---	---	---
Coal Mining Co., Peoria, Ill.	---	---	---

	do.	Miners.	Union dispute and working conditions.	Unclassified, settled by parties before arrival of commissioner.	Feb. 1	May 18	
Crescent Coal Mining Co., Peoria, Ill.	do.	Silk workers.	Wage dispute.	Pending.	Apr. 28	70	
L. A. W. Silk Co., East Stroudsburg, Pa.	do.	Telegraph operators	Installation of teletype machines which reduced wages from \$250 to \$175 per month.	Unclassified. Part reemployed; others on waiting list.	May 7	44	
C. F. Childs & Co., Brokers, New York City.	do.	Melon pickers.	Working conditions.	Pending.	May 1	5,000	
Melon growers and shippers, Imperial Valley, Calif.	Threatened strike.	Silk workers.	Wage dispute.	Adjusted. Former wage restored.	May 5	55	30
Roseto Silk Co., Roseto, Pa.	Strike.	Plumbers.	Wages and working conditions.	Unclassified. Allowed 5-day week; no increase at this time.	May 1	87	
Plumbers and steam fitters, Beaver, Pa.	do.	Overall makers.	Discharged 21 girls.	Adjusted. Company will reemploy girls when business warrants.	May 2	21	271
Overall makers, Gadsden, Ala.	Controversy.	Riveters, buckers, and heaters.	Asked wage increase.	Adjusted. Increase allowed to heaters; others allowed more satisfactory conditions.	Apr. 25	80	100
Standard Steel Car Co., Hammond, Ind.	Strike.	Rivet heaters.	do.	Adjusted. Returned at same wages.	May 8	30	60
General American Tank Car Corporation, East Chicago, Ind.	do.	Barbers.	Renewal of agreement.	Pending.	May 12	30	
Barbers, Mount Vernon, N. Y.	do.	Truck drivers.	Protest against hauling sugar to establishment where men were on strike.	Adjusted. Agreed not to haul to company where strike existed.	May 14	40	30
Gensen Trucking Co., Bronx, N. Y.	do.	Textile workers.	Wage cut.	Accepted 1/2 c. cut per yard.	May 13	100	24
Saleschitz Silk Co., East Stroudsburg, Pa.	do.	Carpenters.	Asked increase from 75 to 85 cents per hour.	Unclassified. Others employed.	May 8	15	
Pitt Construction Co., Girard, Pa.	do.	Barbers.	Asked that shops close at 9 p. m. Saturdays; improved hours, union recognition, and holidays.	Adjusted. All demands granted.	May 19	700	
Barbers, New York City.	do.	Tunnel workers.	Wage cut and longer hours.	Pending.	do.	70	300
S. A. Healy Construction Co., Detroit, Mich.	Threatened strike.	Molders.	Four men discharged.	Unable to adjust.	May 10	50	8
United Stove & Furnace Co., Birmingham, Ala.	Strike.	Taxicab drivers.	Asked wage increase.	Adjusted. Allowed 30 to 35 per cent of gross meter receipts.	May 19	25	
Tube City Taxi & Transfer Co., Brown & White Taxi Co., McKeesport, Pa.	do.	Paper-mill workers.	Objection to wage scale of Canada mill.	Adjusted. Present agreement extended until 1931.	Apr. 28	2,500	2,500
Minneapolis & Ontario Paper Co., International Falls, Minn.	Threatened strike.	Carpenters.	Asked 10 cents per hour increase and 5-day week.	Adjusted. Allowed 10 cents per hour increase; 5 1/2 day continued.	May 19	150	340
Carpenters, Michigan City, Ind.	Strike.	Shingle weavers.	Wages cut 20 per cent.	Adjusted. Men accepted stock in company; compromise agreement.	do.	36	24
Blue Ribbon Products Shingle Manufacturers, Kalama, Wash.	do.	Plumbers.	Wages and hours.	Adjusted. Allowed 40-hour week at \$45; agreement for one year.	May 6	48	57
Plumbers, Wakefield, Melrose, and Reading, Mass.	do.	Oil workers.	Wages.	Pending.	May 12	140	200
Dubbs Plant of Shell Oil Co., Wilmington, Calif.	Controversy.	Farm and garden workers.	Objection to employment of Filipino labor.	Adjusted. Both Japanese and American growers agreed to employ white workers.	May 10	200	2,500
Farm laborers and truck gardeners, White River Valley, Wash.	do.	Employees.	Objection to nonunion labor in the department.	Pending.	May 19	200	
Public Works Department, Scranton, Pa.	Threatened strike.						



LABOR DISPUTES HANDLED DURING THE MONTH OF MAY, 1930—Continued

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
White Transportation Co., New York City.	Strike.....	Teamsters.....	Asked union recognition and wage increase.	Adjusted. Union agreement signed; all returned.	1930 May 1	1930 May 21	40	-----
Knox Hat Corporation, Brooklyn, N. Y.	do.....	Hat makers.....	Protest against Bedaux system and piece rates.	Adjusted. Conditions readjusted by factory workers' council.	May 6	May 31	36	-----
Josephinum College, Flint, Ohio....	Threatened strike.	Building trades.....	Objection to nonunion labor....	Pending.....	May 20	-----	180	-----
Power plant Building, Michigan City, Ind.	Controversy.....	Carpenters.....	Asked 10 cents per hour increase and 5-day week.	Adjusted. Satisfactorily settled and all returned.	May 19	May 26	75	435
Plumbers, Summit, N. J.....	Strike.....	Plumbers.....	Asked 5-day week and \$13 per day.	Adjusted. Allowed 40-hour week and \$12 per day.	May 1	May 20	70	44
David Max, Jersey City, N. J.....	do.....	Glaziers.....	Shop steward discharged.....	Adjusted. Another employee selected as shop steward.	May 9	May 9	7	5
Montrose Construction Co., Buffalo, N. Y.	do.....	Engineers.....	Nonunion labor employed.....	Unable to adjust. Places filled by other workers.	May 14	May 24	12	70
S. A. Healy Construction Co., Detroit, Mich.	Threatened strike.	Holsting engineers.....	Failure to pay prevailing wage scale.	Pending.....	May 22	May 28	20	300
J. P. Callaghan (Inc.), Harrison, N. J.	Strike.....	Teamsters, chauffeurs and yardmen.	Wages and 5-day week under discussion.	Pending. Returned pending negotiations.	May 26	-----	150	20
Mageana Throwing Co., Wilkes-Barre, Pa.	do.....	Silk throwers.....	Changing spinners from 1-time spinners to 2-time spinners, which caused wage cut.	Adjusted. Readjusted without decrease in wages.	May 14	May 16	7	-----
R. E. Rappaport Co., Chicago, Ill.	Lockout.....	Leather workers.....	Wage cut.....	Pending.....	May 28	-----	14	14
Midwest Luggage Co., Chicago, Ill.	Controversy.....	do.....	do.....	Adjusted. Accepted temporary wage cut.	May 22	May 24	5	-----
Warner Bros. Theater, Youngstown, Ohio.	Strike.....	Carpenters and bricklayers.....	Proposed wage cut of \$1 for carpenters.	Adjusted. Proposal to cut wages withdrawn.	May 26	June 5	1,400	2,100
Teamsters and chauffeurs, Philadelphia, Pa.	do.....	Teamsters.....	Wages and hours.....	Adjusted. Allowed \$2.50 per week increase, to \$32.50; conditions improved.	May 5	May 31	700	300
Painters, Baltimore, Md.....	do.....	Painters.....	Asked \$3.20 per day increase, to \$12.	Wage increase allowed.....	May 16	June 26	300	-----
Sausage and bologna makers, New York City.	do.....	Sausage makers.....	Alleged discrimination.....	Adjusted. Strike called off; men returned.	May 6	May 17	14	40
Total.....	-----	-----	-----	-----	-----	-----	16,820	19,224

## Strikes and Lockouts in Great Britain and Northern Ireland in 1929

THE English Ministry of Labor, following its usual custom, gives in the issue of the Labor Gazette for May, 1930, some data concerning strikes and lockouts occurring in the United Kingdom during 1929. The following table gives the number of industrial disputes beginning during the year, with the number of workers involved and days lost in all strikes in progress during the year.

TABLE 1.—NUMBER OF INDUSTRIAL DISPUTES, WORKERS INVOLVED, AND DAYS LOST DURING 1929 IN GREAT BRITAIN AND NORTHERN IRELAND, BY INDUSTRY

Industry group	Disputes beginning in 1929	Workers involved in all disputes in progress during year	Number of working-days lost during year
Coal mining.....	153	78, 500	576, 000
Other mining and quarrying.....	9	1, 200	90, 000
Brick, pottery, glass, etc.....	12	500	6, 000
Iron and steel.....	7	3, 100	56, 000
Engineering.....	18	19, 900	62, 000
Shipbuilding.....	25	8, 000	529, 000
Other metal.....	30	7, 700	120, 000
Textile.....	58	400, 100	6, 752, 000
Clothing.....	17	1, 600	11, 000
Woodworking, furniture, etc.....	17	1, 400	15, 000
Paper, printing, etc.....	2	400	20, 000
Building, public works, contracting, etc.....	40	3, 300	28, 000
Transport.....	21	7, 200	13, 000
Commerce, distribution, and finance.....	5	300	3, 000
Other.....	17	600	6, 000
Total.....	431	533, 800	8, 287, 000

This table shows a distinctly worse situation than in 1928, during which year 302 industrial disputes occurred, 124,400 workpeople were involved, and 1,388,000 working-days were lost. A large part of the unfavorable showing of 1929 was due to one textile strike, but apart from this there was a larger number of disputes, of workers involved, and of days lost than in the earlier year. Of the total number of workers shown as involved, approximately 40,600 were indirectly concerned, that is, thrown out of work at the establishments where the disputes occurred, but not themselves parties to the disputes.

### Principal Disputes in 1929

BY FAR the largest dispute in 1929 was that which began on July 29 in the cotton spinning and manufacturing industry of Lancashire and the adjoining counties, the workpeople refusing to accept a reduction of 25 per cent on standard piece-list rates of wages (equivalent to a reduction in current rates of wages of 12.82 per cent in most cases). In this dispute 388,000 workpeople were involved in a loss of over 6,500,000 working-days. On August 15 it was agreed that work should be resumed at the old rate of wages pending reference to a board of arbitration, and a general resumption took place on Monday, August 19. Subsequently the board of arbitration awarded a reduction of 12.5 per cent on standard piece lists (generally 6.41 per cent in current wages), to take effect in September.

Another dispute, lasting from March 2 to June 17, involving 3,800 workpeople and causing a loss of over 300,000 working-days, occurred

among the colliery workers at Seaham Harbor. The dispute, which arose over proposed reductions in piece rates, was finally referred to an arbitrator, who awarded some reductions. A bitterly fought dispute took place in Belfast, where, on April 23, 936 shipyard joiners stopped work to secure an advance in wages of 3s. (73 cents) a week.

The stoppage continued until November 21, by which date over 2,000 riveters, shipwrights, holders-up, and other workers had been rendered idle at the shipyards involved, and nearly half a million working-days lost. A settlement was effected as a result of a conference held on November 19 whereby the Belfast ship joiners' rate for plain time work was increased from 60s. 9d. to 62s. 3d. [\$14.78 to \$15.15] per week (including 10s. [\$2.43] bonus), the excess over 60s. [\$14.60] (the national uniform rate for federated shipyards, coming into operation at the beginning of 1930) to be merged in any future national wage advances.

### Causes of Disputes

THE following table shows the number and proportion of disputes, with the number and proportion of the workers directly involved, arising from the principal causes during 1929. In some cases there was more than one reason for a stoppage. In such instances what appeared to be the principal cause of the stoppage is given.

TABLE 2.—CAUSES OF INDUSTRIAL DISPUTES, 1929

Principal cause	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
Wage questions:				
Wage increases.....	42	9.7	4,400	0.9
Wage decreases.....	82	19.0	411,300	83.5
Other wage questions.....	100	23.2	24,900	5.0
All wage questions.....	224	51.9	440,600	89.4
Hours of labor.....	12	2.8	3,600	.7
Employment of particular classes or persons.....	107	24.8	24,600	5.0
Other working arrangements, rules, and discipline.....	40	9.3	7,100	1.4
Trade-unionism.....	40	9.3	14,500	3.0
Sympathetic action.....	3	.7	2,000	.4
Other.....	5	1.2	300	.1
Total.....	431	100.0	492,700	100.0

As usual, wage questions were accountable for a larger number of disputes than any other cause, being responsible for something over one-half. In the number of persons involved, however, this cause showed an astonishing dominance, owing to the important dispute in the textile industry referred to above. Next in importance came questions relating to the reinstatement of dismissed workpeople and other matters relating to the employment of particular classes or persons. Questions concerning hours, rules and discipline, trade-unionism, and sympathetic action accounted for something over one-fifth of the disputes but involved only a small proportion of workers.

### Results of the Disputes

DATA are given as to the number and proportion of the disputes which resulted in a victory for the workers, for the employers, and which were settled on the basis of a compromise, as follows:



TABLE 3.—RESULTS OF INDUSTRIAL DISPUTES BEGINNING IN 1929

Result	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
In favor of workers.....	89	20.6	23,200	4.7
In favor of employers.....	164	38.1	33,800	6.9
Compromised.....	178	41.3	435,700	88.4
Total.....	431	100.0	492,700	100.0

These figures differ widely from those for 1928 (see Labor Review, July, 1929, p. 152), which showed 13.9 per cent of the disputes (involving 5.1 per cent of the workers) settled in favor of the employees, 47.7 per cent of the disputes (involving 39.3 per cent of the workers) settled in favor of the employers, and 38.1 per cent of the disputes (affecting 55.5 per cent of the workers) compromised.

The largest dispute of the year, that in the cotton industry, terminated in a compromise. Apart from this dispute, the number of workpeople directly involved in compromise disputes was almost equal to the number involved in disputes which were settled in favor of one of the parties.

#### Methods of Settlement

By FAR the largest number of the disputes, 279, or 64.7 per cent, were settled by direct negotiations or arrangements between the parties or their representatives, but only 16.1 per cent of the workers were involved in these; 25, involving 4,900 workers, were settled by conciliation; and 12, involving 391,000 workers, or 79.4 per cent of the total, were settled by arbitration. In 80 disputes, involving 16,000, or 3.3 per cent of the workers, work was resumed on the employer's terms without negotiations. In 24, involving 700 employees, those who ceased work were replaced by others.

# WORKERS' EDUCATION AND TRAINING

## Apprenticeship Legislation in Queensland

**T**HE apprenticeship system of Queensland has been modified by a law effective February 20, 1930, known as the apprentices and minors act of 1929, the terms of which are given in the Queensland Industrial Gazette for March 24, 1930.

The law is to be administered by a central executive body acting in conjunction with group committees. The executive body consists of two members appointed by the Minister of Labor and three representatives each of the employers and the unions, elected by their respective representatives on the group committees. Members hold office for three years and are eligible for reappointment. Group committees are to be formed for each trade or group of trades and are to consist of equal numbers of representatives appointed by the employers and the industrial union or unions of employees, with the chairman of the executive body as chairman of each group. Each trade representative must have an expert knowledge of, and shall have been actually employed or engaged in, the calling he represents.

The executive body is empowered to advise as to the trades or industries which are to be regarded as skilled, under the meaning of the act, to advise as to entrance examinations to be imposed upon candidates for apprenticeship, to collaborate with the group committees on matters relating to apprentices or the employment of minors, and to fix, in conjunction with them, the proportion of apprentices to journeymen in each trade and the ratio between journeymen and apprentices for the individual employer. Every employer, however, has the right to employ at least one apprentice, even though he has no other employee. The executive body also has power to determine the rates of pay for apprentices and minors.

Candidates for apprenticeship must be registered with the secretary of the executive body, and employers desiring apprentices must obtain them through this register. The candidates must either pass an examination or produce a certificate from a head teacher showing that they have reached a certain educational standard. On entering apprenticeship they must be indentured and must serve a probationary period of six months.

The group committees, in conjunction with local advisory committees, are to have oversight of the work done by apprentices and the facilities for training provided by their employers, to see that opportunities for technical education and training are given and made use of, and may transfer an apprentice from one employer to another, should need arise.

A novel feature of the act is the provision for an intermediate period between apprenticeship and full journeyman status. On completing his course and passing the final examination, the worker may be designated a "young journeyman" and as such may pursue his trade for three periods of six months each, receiving during the first period 70 per cent, during the second 80 per cent, and during

the third 90 per cent of the full journeyman wage. If, however, he can satisfy the executive body that he is fully qualified for the work of a journeyman, this intermediate stage may be omitted.

It is expressly provided that "no apprentice, probationer, or minor shall be compelled to become a member of an industrial union."

The act also provides for the supervision of minors who are not apprentices and makes regulations for their employment.

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### Plan for Village Colleges in England

**A**CCORDING to Industrial and Labor Information (May 19, 1930), the Cambridge Education Committee has indorsed a scheme for establishing centers, to be known as village colleges, to serve groups of neighboring villages. An attempt will be made to coordinate in them all the rural educational services of the county council, such as rural primary and adult education, agricultural demonstration and instruction, public health services, library service, and outdoor recreational facilities. Voluntary organizations, such as women's institutes, the British Legion, Boy Scouts, and Girl Guides will also use them as centers, and the playing fields will be available for local athletic clubs. The basic idea of the scheme is that the individual village is too small to support the social and recreational facilities it needs, but that the growth of transportation services has made it possible for a group of small communities to cooperate in providing a center for such activities for the whole neighborhood.

A village college was planned at Sawston five years ago and will be opened in October. It will serve a surrounding area of about six villages. The building will include a hall, seating about 400, a domestic science block, and a workshop and laboratories, and the buildings will be available for concerts, cinema entertainments, and, in the evenings and during holidays, for social gatherings. Separate rooms are provided for public health services, including maternity and child welfare, for committee meetings, etc. Finally, there is a library and reading room, also school gardens, demonstration plots and a 6-acre recreation ground. The cost has been about £16,000 (\$77,864).

Ten similar village colleges are planned in the country. The total capital cost of the scheme is estimated at £124,000 (\$603,446). Toward this fund the Laura Spelman Fund of New York have offered to contribute £45,000 (\$218,993) in view of the example which the scheme will afford of the coordination of statutory and voluntary services in the English countryside and of its relevance to rural life and conditions in other countries. The remainder has been offered partly by public authorities and partly by trust funds or private individuals.



# WAGES AND HOURS OF LABOR

## Hours and Earnings in the Boot and Shoe Industry, 1930

**A** STUDY of hours and earnings of the workers in the boot and shoe industry in the United States was made by the Bureau of Labor Statistics early in 1930. Data were collected for 31,551 males and 23,636 females in 161 representative shoe factories in 16 of the most important States in the industry. Previous studies of the industry were made in each of the years from 1910 to 1914 and in the even years from 1914 to 1928.

The present study reveals that the average full-time hours per week of wage earners in the industry, all occupations combined, were 48.9 in 1930, as compared with 49.1 in 1928. Average earnings per hour were 51 cents in 1930 and 53 cents in 1928. Average full-time earnings per week were \$24.94 in 1930 and \$26.02 in 1928. Between 1928 and 1930, hours per week decreased 0.4 per cent, earnings per hour decreased 3.8 per cent, and average full-time earnings per week decreased 4.2 per cent.

### Trend of Wages and Hours, 1910 to 1930

THE trend of wages and hours in this industry since 1910 is shown in Table 1.

The averages in this table for the years from 1910 to 1914 are for the wage earners in selected occupations only and are directly comparable one year with another. Those for the even years from 1914 to 1930 are for wage earners in all occupations in the industry and are also comparable one year with another. Averages for wage earners in selected occupations should not be compared with those for wage earners in all occupations.

The index numbers in Table 1, with the 1913 averages as the base, or 100 per cent, are for the purpose of furnishing comparable figures, one year with another, over the entire period from 1910 to 1930. The index for any year from 1910 to 1914 for selected occupations is the percentage that the average for the year is of the average for 1913. The index for any year from 1914 to 1930 for all occupations was computed by increasing or decreasing the 1914 index for the wage earners in the selected occupations in proportion to the increase or decrease in the average for each year as compared with the averages for all employees in 1914. Average full-time hours per week decreased from year to year from an index of 102.7 in 1910 to 88.2 in 1920, increased to 88.4 in 1922, to 88.9 in 1924 and 1926, to 89.2 in 1928 and then decreased to an index of 88.8 in 1930. The peak of earnings came in 1920 with an index of 232.0 for average earnings per hour and 203.7 for average full-time earnings per week. Indexes of average full-time earnings per week did not increase or decrease in the same proportion as average earnings per hour, because of the change from year to year in average full-time hours per week

TABLE 1.—AVERAGE HOURS AND EARNINGS, WITH INDEX NUMBERS, IN THE BOOT AND SHOE INDUSTRY, 1910 TO 1930

	Year	Number of establishments	Number of wage earners	Average			Index numbers (1913=100)		
				Full-time hours per week	Earnings per hour	Full-time earnings per week	Full-time hours per week	Earnings per hour	Full-time earnings per week
Selected occupations only.....	1910	60	10,581	56.5	\$0.286	\$16.07	102.7	92.0	94.1
	1911	81	15,028	56.3	.292	16.37	102.4	93.9	95.8
	1912	81	19,405	55.5	.288	15.91	100.9	92.6	93.2
	1913	88	19,911	55.0	.311	17.08	100.0	100.0	100.0
	1914	91	18,567	54.6	.314	17.11	99.3	101.0	100.2
All occupations.....	1914	91	49,276	54.7	.243	13.26			
	1916	136	60,692	54.6	.259	14.11	99.1	107.5	106.6
	1918	143	58,321	52.3	.336	17.54	94.9	139.7	132.5
	1920	117	51,247	48.6	.559	26.97	88.2	232.0	203.7
	1922	104	47,261	48.7	.501	24.45	88.4	207.9	184.7
	1924	106	45,460	49.0	.516	25.28	88.9	214.1	190.9
	1926	154	52,697	49.0	.528	25.87	88.9	219.1	195.4
	1928	157	48,658	49.1	.530	26.02	89.2	220.3	196.6
	1930	161	55,187	48.9	.510	24.94	88.8	212.0	183.5

<sup>1</sup> Two sets of averages are shown for this year—one for selected occupations and the other for all occupations in the industry. The 1910 to 1914 averages for selected occupations are comparable one year with another as are those for all occupations one year with another from 1914 to 1928.

### Hours and Earnings, 1928 and 1930, by Occupation and Sex

THE establishments included in the 1930 study, like those covered in former years, are representative of the factories in each State in which the boot and shoe industry is of material importance. The study was limited to establishments in which the principal products were men's, women's, or children's shoes made by the welt, McKay, or turn process. Data were not taken for any establishments whose main product was nailed or pegged shoes, or specialties such as slippers, leggings, felt or rubber footwear, nor for factory officials, office employees, foremen, power-house employees, watchmen, teamsters, or chauffeurs.

Except for a very few factories, the 1930 wage data used in the report were taken directly from the pay rolls or other records of the factories by agents of the bureau for a representative pay period in January, February, or March. The shoe factories in the 16 States included in the study in 1930 employed, according to the 1927 Census of Manufacturers, 97.4 per cent of all wage earners in the industry in all States in that year. The wage earners included in the 1930 study represent 27.9 per cent of the total number employed in the 16 States in 1927 and 27.2 per cent of the total in the United States in that year.

Table 2 shows for 1928 and 1930, average full-time hours per week, earnings per hour, and full-time earnings per week. The averages are for males and for females in each of the specified occupations, and also for the group tabulated as "Other employees." This group includes those occupations in which the number of wage earners was not sufficient to warrant separate tabulation.

In 1930 average earnings per hour of males ranged by occupation from 35.2 cents for stampers, linings and uppers, to \$1.058 for turn sewers, and of females ranged from 30 cents for shoe cleaners to 50.6 cents for cutters, vamp and whole shoe machine.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX

Department and occupation	Sex	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Cutting department											
Cutter, vamp and whole shoe, hand	M	110	127	1,777	2,226	48.6	48.7	\$0.824	\$0.796	\$40.95	\$38.77
Cutter, vamp and whole shoe, machine	M	59	58	882	958	48.7	49.4	.669	.663	32.58	32.75
	F	10	8	43	30	50.3	49.9	.471	.506	23.69	25.25
Cutters, trimmings, hand	M	101	101	733	671	48.9	48.9	.530	.510	25.92	24.94
	F	6	10	19	22	49.7	49.0	.363	.405	18.04	19.85
Cutters, trimmings, machine	M	50	50	259	225	49.9	50.3	.436	.467	21.76	23.49
	F	9	21	36	87	49.4	49.0	.372	.411	18.38	20.14
Skivers, upper	M	34	36	98	104	48.1	48.3	.653	.651	31.41	31.44
	F	110	121	541	664	49.1	48.8	.458	.447	22.49	21.81
Cutters, linings, hand	M	91	101	338	466	48.7	48.6	.649	.630	31.61	30.62
	F	3		6		49.7		.416		20.68	
Cutters, linings, machine	M	54	57	179	350	49.2	49.2	.566	.481	27.85	23.67
	F	4	6	7	21	49.7	49.7	.334	.394	16.60	19.58
Sole leather department											
Cutters, outsole	M	60	48	285	293	49.3	48.6	.716	.744	35.30	36.16
Cutters, insole	M	54	49	349	353	49.2	49.0	.644	.608	31.68	29.79
Rounders, outsole and insole	M	89	96	166	187	49.8	49.3	.627	.622	31.22	30.66
	F	1		(1)		(1)		(1)		(1)	
Channelers, outsole and insole	M	93	98	193	198	49.5	49.3	.681	.686	33.71	33.82
Cutters, top and heel lifts, machine	M	33	25	131	211	48.4	48.8	.517	.554	25.02	27.04
Heel builders, hand	M	11	8	32	29	51.6	48.3	.388	.541	20.02	26.13
	F	5	9	23	44	52.0	48.8	.403	.424	20.96	20.69
Heel builders, machine	M	23	26	97	66	48.7	50.0	.498	.483	24.25	24.15
	F	13	16	124	138	48.1	48.8	.453	.418	21.79	20.40
Fitting and stitching department											
Stampers, linings or uppers	M	7	18	15	32	48.0	50.4	.621	.352	29.81	17.74
	F	123	129	570	728	48.9	48.8	.400	.382	19.56	18.64
Cementers and doublers, hand and machine	M	5	21	9	58	46.2	47.7	.636	.537	29.38	25.61
	F	124	130	1,318	1,636	49.3	48.9	.330	.335	16.27	16.38
Folders, hand and machine	M	11	10	51	70	45.4	44.7	.808	1.036	36.68	46.31
	F	119	130	928	1,208	48.8	48.6	.416	.388	20.30	18.86
Perforators	M	18	18	34	41	48.3	47.8	.648	.616	31.30	29.44
	F	96	99	269	272	49.4	49.1	.424	.430	20.95	21.11
Tip stitchers	M	8		16		47.8		.624		29.83	
	F	69	58	260	300	48.8	48.7	.440	.432	21.47	21.04
Closers or seamers	F	117	122	379	398	49.5	49.0	.407	.404	20.15	19.80
Seam rubbers, hand and machine	M	13	11	20	18	48.0	47.4	.408	.409	19.58	19.39
	F	50	75	106	159	49.3	49.4	.346	.333	17.06	16.45
Lining makers	M		6		12		47.5		.716		34.01
	F	129	137	1,046	1,075	49.2	48.8	.398	.395	19.58	19.28
Closers-on	F	3	25	7	57	49.1	49.9	.382	.366	18.76	18.26
Top stitchers	M	30	32	132	113	47.9	47.2	.830	.787	39.76	37.15
	F	124	132	1,399	1,648	49.4	49.1	.451	.419	22.28	20.57
Binders	M		11		38		46.9		.895		41.98
	F	92	105	534	615	49.2	48.9	.492	.439	24.21	21.47
Buttonhole makers	F	57	34	81	42	49.2	49.4	.401	.390	19.73	19.27
Button fasteners	F	30	50	48	117	49.8	48.7	.352	.334	17.53	16.27
Eyeletters	M	36	46	59	79	48.8	48.7	.588	.503	28.69	24.50
	F	62	71	110	135	49.7	49.4	.435	.408	21.62	20.16
Vampers	M	54	64	270	347	48.2	48.2	.727	.672	35.04	32.39
	F	119	125	1,022	1,164	49.3	49.1	.505	.465	24.90	22.83
Barrers	F	39	36	57	66	49.5	49.5	.393	.395	19.45	19.55
Tongue stitchers	F	65	78	203	267	49.0	49.0	.386	.371	18.91	18.18
Fancy stitchers	M	20	32	135	165	47.2	46.7	.778	.834	36.72	38.95
	F	124	137	2,534	3,265	49.4	49.1	.423	.400	20.90	19.64
Back-stay stitches	F	77	82	279	317	49.1	49.1	.419	.393	20.57	19.30
Table workers	F	88	113	672	972	48.3	48.4	.318	.314	15.36	15.20
Lacers, before lasting	M	6		6		49.7		.428		21.27	
	F	83	87	128	152	49.3	49.1	.373	.355	18.39	17.43
Lasting department											
Last pickers and sorters	M	105	112	245	308	49.3	49.0	.477	.465	23.52	22.79
Assemblers for pulling over machine	M	116	125	537	624	49.0	49.0	.577	.568	28.27	27.83
	F	10	9	26	32	49.9	49.4	.501	.452	25.00	22.33
Pullers-over, hand	M	13	9	32	23	48.4	49.3	.710	.683	34.36	33.67
Pullers-over, machine	M	120	130	537	603	49.2	49.1	.740	.715	36.41	35.11
Side lasters, hand	M	31	23	128	148	48.2	49.3	.690	.637	33.26	31.40
Side lasters, machine	M	104	117	660	736	49.3	49.0	.661	.663	32.59	32.49
Bed-machine operators	M	117	130	1,207	1,480	49.2	49.0	.682	.657	33.55	32.19

<sup>1</sup> Data included in total.



TABLE 2.—AVERAGE HOURS AND EARNINGS 1928 AND 1930, BY OCCUPATION AND SEX—Continued

Department and occupation	Sex	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Lasting department—Continued											
Hand method lasting machine operators	M	9	19	101	74	47.2	49.4	\$0.856	\$0.673	\$40.40	\$33.25
Turn lasters, hand	M	31	24	706	789	47.9	46.5	.831	.780	39.80	36.27
Turn lasters, machine	M	6	—	50	—	52.0	—	.575	—	29.90	—
Turn sewers	M	28	15	66	38	49.6	48.0	.873	1.058	43.30	50.78
Tack pullers	M	95	103	284	315	49.2	49.0	.448	.415	22.04	20.34
	F	1	—	(1)	—	(1)	—	(1)	—	(1)	—
Bottoming department											
Goodyear welters	M	86	92	328	377	49.1	49.0	.890	.820	43.61	40.18
Welt beaters and slashers	M	63	72	118	152	49.9	49.1	.508	.524	25.35	25.73
Bottom fillers, hand and machine	M	81	95	139	198	49.3	49.3	.512	.445	25.24	21.94
Sole cementers, hand and machine	M	61	76	110	176	49.1	47.5	.425	.425	20.87	20.19
	F	5	17	9	51	50.8	49.1	.342	.368	17.37	18.07
Sole layers, hand and machine	M	113	114	237	280	49.0	49.2	.656	.594	32.14	29.22
Rough rounders	M	84	88	226	278	48.7	49.1	.815	.751	39.69	36.87
Channel openers and closers	M	92	98	287	336	49.4	48.9	.512	.506	25.29	24.74
	F	16	28	43	65	48.8	48.9	.417	.417	20.35	20.39
Goodyear stitchers	M	89	100	461	576	48.9	49.1	.766	.727	37.46	35.70
McKay sewers	M	50	54	138	151	49.4	49.6	.755	.684	37.30	33.93
Stitch separators	M	55	68	117	168	49.1	49.1	.533	.491	26.17	24.11
Levelers	M	122	124	318	390	49.3	49.1	.648	.586	31.95	28.77
Heelers, leather	M	92	99	248	262	49.0	49.2	.764	.689	37.44	33.90
Heelers, wood	M	80	87	798	891	49.4	48.4	.829	.746	40.95	36.11
Heel trimmers or shavers	M	94	101	198	232	49.3	49.2	.716	.670	35.30	32.96
Heel breasters	M	72	68	116	132	48.8	48.2	.618	.586	30.16	28.25
Edge trimmers	M	131	140	754	895	49.1	49.1	.764	.722	37.51	35.45
Sluggers	M	31	39	39	60	49.1	48.8	.618	.550	30.34	26.84
Finishing department											
Buffers	M	122	126	356	364	49.5	49.1	.651	.620	32.22	30.44
Naumkeag operators	M	(2)	71	(2)	122	(2)	48.8	(2)	.695	(2)	33.92
Edge setters	M	133	140	738	794	49.1	49.0	.755	.706	37.07	34.59
Heel scourers	M	97	101	312	352	49.1	49.2	.589	.567	28.92	27.90
Heel burnishers	M	91	104	236	308	49.3	49.3	.581	.527	28.64	25.98
	F	—	5	—	14	—	49.6	—	.341	—	16.91
Bottom finishers	M	104	123	309	491	48.9	48.8	.632	.576	30.90	28.11
	F	—	13	—	60	—	49.5	—	.375	—	18.56
Brushers	M	78	69	189	175	49.4	48.9	.454	.436	22.43	21.32
	F	13	22	36	42	49.5	49.1	.336	.342	16.63	16.79
Shoe cleaners	M	42	47	131	153	48.3	48.7	.493	.441	23.81	21.48
	F	26	47	77	145	49.0	49.0	.334	.300	16.37	14.70
Last pullers	M	119	127	226	276	49.2	49.2	.510	.501	25.09	24.65
Trees	M	118	125	1,072	1,210	49.2	49.1	.624	.563	30.70	27.64
	F	36	42	239	280	49.3	48.4	.386	.380	19.03	18.39
Repairers	M	48	50	134	142	48.5	48.2	.569	.606	27.60	29.21
	F	120	123	832	863	49.4	49.2	.377	.383	18.62	18.84
Dressers	M	16	—	24	—	48.5	—	.487	—	23.62	—
	F	77	88	290	392	49.3	48.9	.375	.355	18.49	17.36
Sock liners	M	12	11	23	18	49.7	48.4	.433	.463	21.52	22.41
	F	116	124	305	363	49.0	48.8	.389	.374	19.06	18.25
Lacers (before packing)	M	7	—	10	—	48.2	—	.378	—	18.22	—
	F	90	95	204	214	49.2	49.3	.320	.331	15.74	16.32
Packers	M	18	26	31	71	49.6	48.8	.443	.441	21.97	21.52
	F	125	132	379	457	48.7	48.8	.388	.379	18.90	18.50
Other employees	M	156	162	9,070	9,073	49.0	48.8	.513	.500	25.14	24.40
	F	141	151	5,155	5,059	49.2	48.9	.361	.351	17.76	17.16
All occupations	M	157	161	28,312	31,551	49.0	48.8	.625	.604	30.63	29.48
	F	144	152	20,346	23,636	49.2	48.9	.397	.382	19.53	18.68
All occupations, both sexes	—	157	161	48,658	55,187	49.1	48.9	.530	.510	26.02	24.94

<sup>1</sup> Data included in total.<sup>2</sup> Data included in "other employees."

## Hours and Earnings, 1928 and 1930, by Sex and State

THE figures in Table 3 show average full-time hours per week, earnings per hour, and full-time earnings per week. The averages are for all males, for all females, and also for both sexes combined in all occupations in each State and in all States in 1928 and 1930.

It is seen that average full-time hours per week of males ranged by States from 46.8 to 53.1 in 1928 and from 45.9 to 52.9 in 1930; of females ranged from 47.6 to 53.2 in 1928, and from 46.5 to 53.1 in 1930; and of all males and females combined, or the industry, ranged from 47.1 to 53.1 in 1928, and from 46.1 to 53.0 in 1930. Also that the averages for all males in all the States were 49.0 per week in 1928 and 48.8 in 1930; and for all females were 49.2 in 1928 and 48.9 in 1930.

TABLE 3.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY SEX AND STATE

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
	1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
<i>Males</i>										
Illinois	9	6	2,071	1,808	49.5	48.8	\$0.613	\$0.624	\$30.34	\$30.45
Kentucky <sup>1</sup>		3		386		52.4		.434		22.74
Maine	6	7	1,428	1,277	53.1	52.9	.516	.511	27.40	27.03
Maryland and Virginia	8	7	1,033	946	49.0	48.8	.511	.490	25.04	23.91
Massachusetts	50	56	7,096	8,725	48.1	48.2	.723	.671	34.78	32.34
Michigan	4	4	198	346	49.6	49.6	.558	.554	27.68	27.48
Minnesota	4	4	300	347	50.1	50.0	.506	.498	25.35	24.90
Missouri	11	11	3,506	3,730	49.6	49.0	.549	.548	27.23	26.85
New Hampshire	10	9	1,761	1,718	49.2	49.0	.575	.505	28.29	24.75
New Jersey	4	3	467	327	46.8	45.9	.657	.711	30.75	32.63
New York	21	19	5,388	6,210	47.9	47.6	.670	.666	32.09	31.70
Ohio	7	7	1,877	1,677	49.9	48.2	.607	.590	30.29	28.44
Pennsylvania	12	12	1,813	1,873	50.0	51.1	.542	.512	27.10	26.16
Tennessee <sup>1</sup>		4		503		51.8		.440		22.79
Wisconsin	11	9	1,374	1,678	49.4	49.7	.597	.602	29.49	29.92
Total	157	161	28,312	31,551	49.0	48.8	.625	.604	30.63	29.48
<i>Females</i>										
Illinois	9	6	2,052	1,785	50.1	49.1	.367	.376	18.39	18.46
Kentucky <sup>1</sup>		3		379		52.2		.273		14.25
Maine	6	7	1,119	1,130	53.2	53.1	.375	.360	19.95	19.12
Maryland and Virginia	8	7	604	605	48.9	48.8	.288	.311	14.08	15.18
Massachusetts	40	48	4,673	6,197	47.9	47.9	.473	.446	22.66	21.36
Michigan	4	4	130	257	49.6	49.6	.325	.318	16.12	15.77
Minnesota	4	4	254	285	50.0	49.9	.303	.321	15.15	16.02
Missouri	10	11	2,450	2,824	49.8	49.2	.336	.321	16.73	15.79
New Hampshire	10	9	1,311	1,437	49.3	49.1	.393	.349	19.37	17.14
New Jersey	4	3	266	189	47.6	46.5	.439	.483	20.90	22.46
New York	20	19	3,556	3,864	48.5	48.4	.430	.411	20.86	19.89
Ohio	7	7	1,574	1,597	49.8	48.0	.355	.361	17.68	17.33
Pennsylvania	10	11	1,181	1,146	49.7	50.0	.343	.331	17.05	16.55
Tennessee <sup>1</sup>		4		456		51.4		.268		13.78
Wisconsin	11	9	1,176	1,485	48.7	49.0	.412	.409	20.06	20.04
Total	144	152	20,346	23,686	49.2	48.9	.397	.382	19.53	18.68
<i>Males and Females</i>										
Illinois	9	6	4,123	3,593	49.8	49.0	.491	.499	24.45	24.45
Kentucky <sup>1</sup>		3		765		52.3		.353		18.46
Maine	6	7	2,547	2,407	53.1	53.0	.455	.442	24.16	23.43
Maryland and Virginia	8	7	1,637	1,551	48.9	48.8	.428	.418	20.93	20.40
Massachusetts	50	56	11,769	14,922	48.1	48.1	.626	.579	30.11	27.85
Michigan	4	4	328	603	49.6	49.6	.469	.456	23.26	22.62
Minnesota	4	4	554	632	50.0	49.9	.414	.422	20.70	21.06
Missouri	11	11	5,956	6,561	49.7	49.1	.462	.451	22.96	22.14
New Hampshire	10	9	3,072	3,155	49.2	49.0	.498	.437	24.50	21.41
New Jersey	4	3	733	516	47.1	46.1	.579	.628	27.27	28.95
New York	21	19	8,944	10,074	48.1	47.9	.575	.569	27.66	27.26
Ohio	7	7	3,451	3,274	49.8	48.1	.489	.477	24.35	22.94
Pennsylvania	12	12	2,994	3,019	49.9	50.7	.465	.443	23.20	22.46
Tennessee <sup>1</sup>		4		959		51.6		.359		18.52
Wisconsin	11	9	2,550	3,163	49.1	49.4	.514	.513	25.24	25.34
Total	157	161	48,658	55,187	49.1	48.9	.530	.510	26.02	24.94

<sup>1</sup> No data for this State prior to 1930.

Table 4 presents, for each State, 1930 average full-time hours per week, earnings per hour, and full-time earnings per week in 13 of the occupations for which data are shown in Table 2. These occupations represent 28.9 per cent of the 55,187 employees included in this study.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 13 OCCUPATIONS IN 1930, BY SEX AND STATE

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Cutters, vamp and whole shoe, hand, male						Skivers, upper, male				
Illinois.....	3	109	48.3	\$0.866	\$41.83					
Kentucky.....	3	34	51.0	.555	28.31					
Maine.....	7	192	52.8	.602	31.79	3	4	52.0	\$0.344	\$17.88
Maryland and Virginia.....	5	63	48.8	.638	31.13	3	5	49.5	.306	15.15
Massachusetts.....	45	820	48.3	.859	41.49	16	51	48.0	.690	33.12
Michigan.....	2	11	50.0	.541	27.05	1	5	50.0	.566	28.30
Minnesota.....	3	9	49.2	.581	28.59					
Missouri.....	4	157	48.6	.777	37.76					
New Hampshire.....	7	88	49.4	.649	32.06	2	2	50.3	.375	18.86
New Jersey.....	3	21	45.6	.831	37.89					
New York.....	19	444	47.6	.894	42.55	6	20	44.6	.944	42.10
Ohio.....	7	124	49.6	.780	38.69					
Pennsylvania.....	8	103	50.1	.616	30.86	2	3	53.0	.441	23.37
Tennessee.....	3	18	54.2	.515	27.91	1	3	55.0	.382	21.01
Wisconsin.....	8	96	48.6	.716	34.80	2	11	50.5	.415	20.96
Total.....	127	2,226	48.7	.796	38.77	36	104	48.3	.651	31.44
Skivers, upper, female						Cementers and doublers, hand and machine, male				
Illinois.....	5	45	48.5	\$0.482	\$23.38	1	1	48.0	\$0.645	\$30.96
Kentucky.....	3	15	51.8	.309	16.01	1	1	53.0	.324	17.17
Maine.....	7	22	52.2	.483	25.21	1	1	50.0	.588	29.40
Maryland and Virginia.....	5	15	48.8	.371	18.10	2	5	50.5	.249	12.57
Massachusetts.....	36	161	47.9	.551	26.39	3	8	49.5	.475	23.51
Michigan.....	4	10	49.5	.316	15.64					
Minnesota.....	4	11	49.9	.318	15.87	1	4	48.0	.288	13.81
Missouri.....	8	56	49.4	.409	20.20	2	2	50.0	.348	17.40
New Hampshire.....	7	47	48.7	.378	18.41	1	2	48.0	.451	21.64
New Jersey.....	1	4	44.0	.616	27.10					
New York.....	15	101	48.3	.493	23.81	3	24	45.0	.711	32.00
Ohio.....	7	65	48.0	.360	17.28	1	1	50.0	.360	18.00
Pennsylvania.....	8	39	50.2	.386	19.38	2	6	49.0	.502	24.60
Tennessee.....	4	18	51.7	.292	15.10	1	1	55.0	.398	21.89
Wisconsin.....	7	55	48.9	.408	19.95	2	2	50.0	.352	17.60
Total.....	121	664	48.8	.447	21.81	21	58	47.7	.537	25.61
Cementers, and doublers, hand and machine, female						Lining makers (including lining closers, side and top facing stitchers), female				
Illinois.....	5	103	49.5	\$0.300	\$14.85	5	67	49.1	\$0.400	\$19.64
Kentucky.....	3	29	51.7	.283	14.63	3	16	53.0	.232	12.30
Maine.....	7	94	53.0	.305	16.17	7	54	53.2	.292	15.53
Maryland and Virginia.....	5	61	48.9	.217	10.61	5	38	49.2	.350	17.22
Massachusetts.....	42	422	47.9	.381	18.25	44	306	47.9	.461	22.08
Michigan.....	3	10	49.5	.219	10.84	3	8	50.0	.298	14.90
Minnesota.....	3	12	49.3	.251	12.37	4	10	49.4	.347	17.14
Missouri.....	8	165	48.9	.315	15.40	8	110	49.4	.300	14.82
New Hampshire.....	8	94	49.3	.291	14.35	8	60	49.1	.318	15.61
New Jersey.....	1	14	44.0	.595	26.18	3	18	45.9	.501	23.00
New York.....	18	290	48.3	.375	18.11	19	199	48.0	.436	20.93
Ohio.....	7	119	48.2	.330	15.91	7	63	47.5	.396	18.81
Pennsylvania.....	7	113	49.8	.281	13.99	8	59	49.9	.327	16.32
Tennessee.....	4	27	52.0	.229	11.91	4	18	51.7	.289	14.94
Wisconsin.....	9	83	48.9	.330	16.14	9	49	48.9	.475	23.23
Total.....	130	1,636	48.9	.335	16.38	137	1,075	48.8	.395	19.28



TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 13 OCCUPATIONS IN 1930, BY SEX AND STATE—Continued

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
	Top stitchers (including under-trimmers and barber trimmers), male					Top stitchers (including under-trimmers and barber trimmers), female				
Illinois	1	9	48.0	\$0.856	\$41.09	5	94	49.5	\$0.391	\$19.35
Kentucky						3	32	52.0	.271	14.09
Maine						7	84	53.3	.408	21.75
Maryland and Virginia	3	5	50.3	.604	30.38	5	46	48.3	.351	16.95
Massachusetts	17	48	49.0	.739	36.21	43	418	47.9	.496	23.76
Michigan						4	35	49.6	.301	14.93
Minnesota						4	20	49.2	.343	16.88
Missouri						8	193	49.4	.352	17.39
New Hampshire						8	109	49.3	.365	17.99
New Jersey	1	1	44.0	.305	13.42	3	9	44.9	.544	24.43
New York	7	38	44.3	.866	38.36	14	254	48.8	.437	21.33
Ohio						7	114	47.7	.405	19.32
Pennsylvania	2	10	48.0	.805	38.64	8	68	50.3	.462	23.24
Tennessee						4	42	51.1	.288	14.72
Wisconsin	1	2	48.0	.589	28.25	9	130	49.0	.458	22.44
Total	32	113	47.2	.787	37.15	132	1,648	49.1	.419	20.57
	Vampers, male					Vampers, female				
Illinois	2	10	48.0	\$0.764	\$36.67	5	98	48.7	\$0.546	\$26.59
Kentucky						3	15	52.8	.397	20.96
Maine	6	20	51.8	.605	31.34	5	40	52.1	.499	26.00
Maryland and Virginia	5	11	48.7	.497	24.20	5	20	49.0	.400	19.60
Massachusetts	32	209	48.2	.666	32.10	36	179	47.9	.581	27.83
Michigan						4	26	49.6	.361	17.91
Minnesota	1	1	50.0	.270	13.50	4	18	50.0	.399	19.95
Missouri	1	6	50.0	.362	18.10	8	161	49.7	.358	17.79
New Hampshire	2	11	48.0	.340	16.32	8	88	48.7	.423	20.60
New Jersey	2	4	44.0	.953	41.93	3	11	46.3	.655	30.33
New York	8	43	46.4	.791	36.70	17	212	48.6	.503	24.45
Ohio						7	85	47.3	.409	19.35
Pennsylvania	2	18	48.0	.870	41.76	7	74	51.0	.363	18.51
Tennessee						4	34	51.8	.309	16.01
Wisconsin	3	14	49.4	.643	31.76	9	103	49.2	.517	25.44
Total	64	347	48.2	.672	32.39	125	1,164	49.1	.465	22.83
	Assemblers for pulling-over machine, male					Assemblers for pulling-over machine, female				
Illinois	5	54	48.9	\$0.603	\$29.49					
Kentucky	3	11	52.7	.469	24.72					
Maine	7	20	52.9	.578	30.58					
Maryland and Virginia	6	25	48.7	.413	20.11					
Massachusetts	39	180	48.3	.645	31.15	3	3	48.0	\$0.634	\$30.43
Michigan	3	10	49.0	.495	24.26					
Minnesota	4	6	50.1	.550	27.60					
Missouri	8	95	49.5	.509	25.20					
New Hampshire	6	19	49.1	.553	27.15	4	12	48.9	.365	17.85
New Jersey	2	12	44.0	.550	24.20					
New York	15	72	47.4	.622	29.48	2	17	50.0	.476	23.80
Ohio	7	47	48.0	.540	25.92					
Pennsylvania	7	26	51.8	.471	24.40					
Tennessee	4	14	51.1	.405	20.70					
Wisconsin	9	33	49.5	.527	26.09					
Total	125	624	49.0	.568	27.83	9	32	49.4	.452	22.33
	Bed machine operators, male					Goodyear stitchers, male				
Illinois	5	127	49.0	\$0.661	\$32.39	2	33	48.0	\$0.967	\$46.42
Kentucky	3	17	52.6	.546	28.72	2	12	53.6	.567	30.39
Maine	7	63	52.7	.628	33.10	5	13	51.4	.674	34.64
Maryland and Virginia	6	45	48.7	.554	26.98	5	22	48.7	.649	31.61
Massachusetts	40	397	48.2	.723	34.85	22	125	48.0	.767	36.82
Michigan	4	21	49.8	.518	25.80	4	13	49.2	.629	30.95
Minnesota	4	16	50.4	.591	29.79	4	9	50.1	.605	30.31
Missouri	8	202	49.6	.638	31.64	5	50	49.7	.654	32.50
New Hampshire	8	90	49.1	.540	26.51	6	44	48.4	.664	32.14
New Jersey	2	9	44.0	.988	43.47	3	6	46.8	.912	42.68
New York	16	234	48.4	.649	31.41	16	115	48.6	.755	36.69
Ohio	7	87	47.7	.672	32.05	6	35	47.7	.751	35.82
Pennsylvania	8	54	53.1	.557	29.58	8	33	52.5	.692	36.33
Tennessee	4	29	51.7	.559	28.90	4	20	51.3	.538	27.60
Wisconsin	8	89	48.2	.725	34.95	8	46	49.6	.739	36.65
Total	130	1,480	49.0	.657	32.19	100	576	49.1	.727	35.70

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 13 OCCUPATIONS IN 1930, BY SEX AND STATE—Continued

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Edge trimmers, male						Edge setters, male				
Illinois.....	5	56	48.8	\$0.749	\$36.55	5	60	48.7	\$0.719	\$38.02
Kentucky.....	3	14	52.2	.692	36.12	3	12	52.4	.531	27.82
Maine.....	7	40	52.8	.575	30.36	7	32	52.7	.605	31.88
Maryland and Virginia..	6	34	48.8	.595	29.04	6	24	48.8	.613	29.91
Massachusetts.....	46	252	48.2	.821	39.57	45	237	48.2	.782	37.69
Michigan.....	4	16	49.4	.658	32.51	4	8	49.4	.670	33.10
Minnesota.....	4	9	49.6	.653	32.39	4	5	49.6	.627	31.10
Missouri.....	8	96	49.6	.611	30.31	8	54	49.2	.688	33.85
New Hampshire.....	8	58	49.1	.642	31.52	8	34	49.1	.616	30.25
New Jersey.....	3	9	47.8	.807	38.57	3	6	46.4	1.015	46.08
New York.....	18	151	48.4	.782	37.85	19	157	48.2	.728	35.09
Ohio.....	7	58	47.7	.718	34.25	7	59	48.3	.659	31.83
Pennsylvania.....	8	41	52.3	.595	31.12	8	44	52.0	.588	30.58
Tennessee.....	4	14	51.4	.583	29.97	4	15	51.7	.496	25.64
Wisconsin.....	9	47	49.4	.743	36.70	9	47	50.0	.710	35.50
Total.....	140	895	49.1	.722	35.45	140	794	49.0	.706	34.59
Treeers, hand and machine, male						Treeers, hand and machine, female				
Illinois.....	3	48	49.4	\$0.424	\$20.95	3	62	48.8	\$0.419	\$20.45
Kentucky.....	3	11	53.3	.470	25.05	1	6	53.0	.441	23.37
Maine.....	7	74	53.3	.468	24.94	1	1	50.0	.413	20.65
Maryland and Virginia..	6	41	48.8	.457	22.30	1	7	50.5	.254	12.83
Massachusetts.....	46	508	48.3	.632	30.53	5	11	47.9	.347	16.62
Michigan.....	4	14	49.6	.564	27.97	1	1	50.0	.566	28.30
Minnesota.....	4	10	50.1	.426	21.34	3	5	49.5	.375	18.56
Missouri.....	6	112	49.6	.516	25.59	6	40	48.7	.335	16.31
New Hampshire.....	7	89	49.3	.424	20.90	1	8	48.0	.378	18.14
New Jersey.....	2	9	44.0	.893	39.29					
New York.....	14	167	47.6	.636	30.27	7	58	48.3	.382	18.45
Ohio.....	4	25	50.0	.441	22.05	4	32	45.6	.411	18.74
Pennsylvania.....	8	45	52.2	.476	24.85	2	2	51.0	.367	18.72
Tennessee.....	4	15	52.3	.368	19.25	2	12	50.0	.280	14.00
Wisconsin.....	7	42	49.6	.604	29.96	5	35	49.3	.393	19.37
Total.....	125	1,210	49.1	.563	27.64	42	280	48.4	.380	18.39
Repairers (not cobblers), including tip fixers and scourers, male						Repairers (not cobblers), including tip fixers and scourers, female				
Illinois.....	4	6	49.7	\$0.389	\$19.33	5	82	49.4	\$0.311	\$15.36
Kentucky.....						3	16	52.8	.384	20.28
Maine.....	4	8	52.5	.470	24.68	7	63	53.4	.358	19.12
Maryland and Virginia..	1	3	49.5	.463	22.92	5	29	48.5	.297	14.40
Massachusetts.....	12	24	48.0	.556	26.69	42	222	47.9	.495	23.71
Michigan.....	1	3	50.0	.530	26.50	3	11	49.5	.360	17.82
Minnesota.....						4	9	49.8	.291	14.49
Missouri.....	2	6	49.7	.514	25.55	8	117	49.1	.300	14.73
New Hampshire.....	1	1	48.0	.355	17.04	8	86	49.2	.358	17.61
New Jersey.....	2	5	44.0	.743	32.69	2	10	51.7	.258	13.34
New York.....	10	58	46.8	.729	34.12	16	105	48.2	.402	19.38
Ohio.....	4	9	47.2	.561	26.48	6	41	48.9	.379	18.53
Pennsylvania.....	4	10	51.3	.500	25.65	5	28	49.1	.382	18.76
Tennessee.....	3	4	53.8	.304	16.36	2	10	50.0	.297	14.85
Wisconsin.....	2	5	48.4	.669	32.38	7	34	49.5	.388	19.21
Total.....	50	142	48.2	.606	29.21	123	863	49.2	.383	18.84

## Recent Changes in Wages and Hours of Labor

INFORMATION received by the bureau regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments only, the data being reported directly

to the bureau by the same establishments that report monthly figures regarding volume of employment; part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made to do so, it is not always possible to avoid duplication of data as between parts 1 and 2.

### Part 1.—Wage Changes in Manufacturing Industries

Six establishments in five industries reported wage-rate increases during the month ending May 15. These increases averaged 4.9 per cent and affected 577 employees, or 32 per cent of all employees in the establishments concerned. Sixty-seven establishments in 22 industries reported wage-rate decreases during the same period. These decreases averaged 5.6 per cent and affected 6,634 employees, or 62 per cent of all employees in the establishments concerned. Twenty-two of the sixty-seven wage-rate decreases were made in sawmills, and affected 2,975 employees; no especial significance can be attached to any other of the changes reported.

#### WAGE CHANGES OCCURRING BETWEEN APRIL 15, 1930, AND MAY 15, 1930

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Hosiery and knit goods.....	365	1	3.5- 8.0	5.0	450	39	(1)
Structural ironwork.....	180	1	10.0	10.0	14	100	(1)
Printing, book and job.....	428	1	12.5	12.5	9	39	(1)
Printing, newspapers.....	441	2	3.0- 4.0	3.4	86	20	(1)
Automobiles.....	215	1	3.0	3.0	18	9	(1)
			Decreases				
Slaughtering and meat packing.....	218	1	7.9	7.9	14	37	(1)
Confectionery.....	341	2	10.0	10.0	174	100	(1)
Cotton goods.....	473	1	10.0	10.0	334	95	(1)
Hosiery and knit goods.....	365	6	7.0-20.0	16.4	559	37	1
Silk goods.....	292	4	3.0-10.0	8.2	355	83	1
Clothing, men's.....	355	2	2.7-15.0	11.3	186	91	(1)
Shirts and collars.....	119	2	10.0	10.0	243	100	1
Clothing, women's.....	423	1	38.0	38.0	57	100	(1)
Iron and steel.....	206	3	2.0- 2.5	2.2	494	40	(1)
Structural ironwork.....	180	1	10.0	10.0	21	100	(1)
Foundry and machine-shop products.....	1,105	2	5.0-10.0	8.9	115	97	(1)
Stoves.....	136	1	5.0	5.0	21	100	(1)
Lumber, sawmills.....	658	22	10.0-12.5	10.0	2,975	79	2
Lumber, millwork.....	354	2	5.0-10.0	8.0	101	89	(1)
Furniture.....	421	2	10.0	10.0	19	22	(1)
Boots and shoes.....	326	1	7.5	7.5	70	100	(1)
Fertilizers.....	175	2	5.0-10.0	6.1	123	96	1
Brick, tile, and terra cotta.....	675	8	10.0-20.0	10.2	190	87	1
Car building and repairing, electric-railroad.....	455	1	4.6	4.6	99	100	(1)
Agricultural implements.....	90	1	7.0	7.0	70	16	(1)
Rubber boots and shoes.....	11	1	3.0	3.0	185	13	1
Automobile tires.....	43	1	10.0	10.0	229	95	(1)

<sup>1</sup> Less than one-half of 1 per cent.



## Part 2.—Changes in Wages and Hours Reported by Trade-Unions, etc., March to June, 1930

CHANGES reported in this group consist principally of those in union wages and hours. Reports received by the bureau for these months cover 14,542 workers, about 90 per cent of whom were in the building trades. Slightly more than 11,000 obtained the 5-day week during this period.

Wage increases in the building trades ranged from 2½ to 15 cents per hour, the majority being about 12½ cents per hour. One decrease is noted, that of hod carriers in Long Beach, Calif. Increases for the printing trades were from 50 cents to \$2.50 per week; for chauffeurs, \$2 to \$3 per week; and for railroad telegraphers, 2 cents per hour.

TABLE 2.—CHANGES IN WAGES AND HOURS, MARCH TO JUNE, 1930

Industry, occupation, and city	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
<b>Building trades:</b>		<i>Per hour</i>	<i>Per hour</i>		
Asbestos workers, Indianapolis, Ind.	Mar. 31	\$1.32½	\$1.32½	44	40
Bricklayers, Des Moines, Iowa	May 1	1.50	1.50	44	40
Carpenters—					
Albany, N. Y.	do.	1.25	1.37½	44	40
Ithaca, N. Y.	do.	1.00	1.10	44	40
Los Angeles, Calif.	do.	1.03¾	1.06¼	1 8	1 8
Seattle, Wash.	do.	1.12½	1.12½	44	2 40
Troy, N. Y.	do.	1.25	1.25	44	40
Cement workers, Waukegan, Ill.	Mar. 1	1.50	1.62½	44	44
Electric workers—					
Denver, Colo.	May 1	( <sup>3</sup> )	( <sup>3</sup> )	44	40
Des Moines, Iowa	Apr. 15	1.37½	1.37½	44	40
Detroit, Mich.	June 1	1.40	1.50	44	44
Ithaca, N. Y.	May 1	1.12½	1.20	44	40
Hod carriers, Long Beach, Calif.	Mar. 10	1.12½	.75	1 8	1 8
Lathers, Des Moines, Iowa	Apr. 15	1.37½	1.37½	44	40
Painters—					
Des Moines, Iowa	May 1	1.12½	1.12½	44	40
Erie, Pa.	do.	1.00	1.05	44	40
Helena, Mont.	Apr. 1	1.00	1.12½	44	40
Houston, Tex.	do.	1.12½	1.25	44	40
Ithaca, N. Y.	May 1	1.00	1.12½	44	40
Lake Geneva, Wis.	( <sup>4</sup> )	1.12½	1.25	44	4 40
Los Angeles, Calif.	May 1	1.03¾	1.06¼	1 8	1 8
Muskegon, Mich.	Apr. 1	.90	1.00	44	40
Schenectady, N. Y.	May 1	1.25	1.37½	40	40
Southampton, N. Y.	Apr. 15	1.00	1.12½	44	40
Waterbury, Conn.	do.	1.12½	1.25	44	40
Plasterers—					
Boise, Idaho	May 1	1.37½	1.50	1 8	1 8
Brownsville, Tex.	Mar. 1	1.37½	1.50	1 8	1 8
Denver, Colo.	June 7	1.50	1.50	44	40
Kansas City, Mo.	Mar. 1	( <sup>3</sup> )	1.50	44	44
Kenosha, Wis.	June 15	1.50	1.62½	1 8	1 8
Plumbers and steamfitters—					
Dayton, Ohio	May 6	1.37½	1.37½	44	40
Denver, Colo.	May 5	1.37½	1.37½	44	40
Elmira, N. Y.	Apr. 14	1.25	1.25	44	40
Do.	June 1	1.25	1.37½	40	40
Erie, Pa.	May 5	1.37½	1.37½	44	40
Ithaca, N. Y.	May 1	1.12½	1.25	44	40
Melrose, Reading, Wakefield, Mass.	May 19	1.25	1.25	44	40
Reading, Pa.	May 1	1.25	1.25	44	40
Haverstraw, N. Y.	Mar. 29	1.37½	1.50	44	40
Reinforced steel workers, Portland, Ore.	Apr. 15	1.10	1.12½	1 8	1 8
Roofers, Indianapolis, Ind.	( <sup>3</sup> )	1.22½	1.27½	1 8	1 8
Sheet-metal workers—					
Duluth, Minn.	June 1	.90	1.00	44	40
Elizabeth, N. J.	May 1	1.50	1.65	44	40
Troy, N. Y.	do.	1.31¼	1.43¾	44	40
Structural-iron workers, Portland, Ore.	Apr. 15	1.25	1.37½	1 8	1 8
All building crafts—					
Lorain, Ohio	( <sup>3</sup> )	1.10-1.60	( <sup>3</sup> )	44	40
Norwich, Conn.	Apr. 15	1.37½	1.50	44	40

<sup>1</sup> Per day.<sup>2</sup> For 4 months in summer.<sup>3</sup> Not reported.<sup>4</sup> 44 hours for 2½ months.

TABLE 2.—CHANGES IN WAGES AND HOURS, MARCH TO JUNE, 1930—Continued

Industry, occupation, and city	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Chauffeurs and teamsters:		<i>Per week</i>	<i>Per week</i>		
Philadelphia, Pa.	Apr. 10	\$30.00	\$32.00	( <sup>3</sup> )	60
Portland, Me., taxi drivers	Mar. 1	18.00	21.00	84	84
Printing and publishing:					
Compositors—					
Bridgeport, Conn., newspaper	do	44.00	45.00	48	48
Edwardsville, Ill., newspaper and job work	Apr. 1	35.00	37.50	48-44	48-44
Mobile, Ala.—					
Newspaper, day	Mar. 1	45.00	47.00	18	18
Newspaper, night	do	48.00	50.00	18	18
New Rochelle, N. Y.—					
Job work., day	Apr. 1	50.00	51.00	44	44
Job work, night	do	53.00 56.00	54.00 57.00	40	40
Princeton, Ind., newspaper and job	do	40.00	41.00	44	44
Stereotypers—					
New Brunswick, N. J., job work	June 1	18.83½	19.00	44	44
Springfield, Ill.—					
Newspaper, day	do	46.50	47.00	48	48
Newspaper, night	do	48.50	49.00	48	48
Telegraphic and telephone workers: Atlanta & West Point R. R., telegraphers	Mar. 1	<i>Per hour</i> .59-.72	<i>Per hour</i> .61-.74	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> Per day.<sup>3</sup> Not reported.

### Wages and Labor Conditions in Alaska, 1928-29

IN THE fiscal year ending June 30, 1929, labor conditions in Alaska remained highly satisfactory, according to the report of the governor of the Territory for that period. Well-stabilized wage schedules adjusted to the cost of living were a factor in the favorable situation. No reports of labor disturbances were received by the governor. There was a dearth of experienced miners at certain large lode mines and in the latter part of the year there was a shortage of laborers reported from certain mines and canneries, which was said to be due to the prospecting activities of some mine employees and to the large salmon runs in some parts of Alaska.

The principal Alaskan industries are fishing and mining.

Computed on the basis of 300 working-days per man per year, the fishing and mining industries together absorb 96 per cent of the labor employed in the industries of Alaska, aside from that engaged by the three railroads that are operating in the Territory. The fishing industry employs 84 per cent and the mining industry 12 per cent of the total. The Federal road-building organizations and the lumber and logging industry of southeastern Alaska represent the only other large employers of labor in the Territory.

According to the Bureau of Fisheries of the United States Department of Commerce, there were 31,086 persons employed by the fishery industry in the calendar year 1928—an increase of 2,214 over the number so employed in the previous 12 months. In 1928, 4,011 men were employed in the mining industry.

The fishing industry is carried on almost entirely in the coastal districts of the first and third judicial divisions. The work season lasts from four to eight months, being dependent upon the nature and situation of the fishery.

In the first judicial division, which includes all of the southeastern part of the Territory, from 35 to 50 per cent of the labor supply is secured from the residents of the Territory, approximately 10 per cent of those so secured being native Indians. Further labor needs are met by importation from the States for the fishing season only. About 45 per cent of these imported workers are employed under the so-called "oriental contract system."

Owing to the remoteness of many of the large canneries and the sparsity of the resident population in the third division, where the largest percentage of the fishery labor is employed, from 15 to 20 per cent of the total labor is secured locally, the balance being imported from the States. Of the labor secured locally in the third division, from 50 to 80 per cent are native Indians. From 35 to 45 per cent of the labor imported into the third division during the fishery season is contract labor.

### Wages

#### Fishing Industry

IN THE fiscal year 1929 the daily wages for general cannery labor resident in the Territory were as follows: In the first judicial division males received from \$3.50 to \$5 and females from \$2 to \$3.50; in the third judicial division males received from \$2.50 to \$5 and females from \$2 to \$4. All other labor in the fishing industry is remunerated according to the scale shown in the following table. In most cases board was furnished in addition to wages.

TABLE 1.—MONTHLY WAGES IN THE ALASKAN FISHING INDUSTRY, 1929

Occupation	First division	Third division	Occupation	First division	Third division
Foremen.....	\$225	\$230	Blacksmiths.....	\$130	\$100
Outside foremen.....	200	180	Firemen.....	100	100
Boat captains.....	145	150	Trapmen.....	90	80
Boat crews, deck hands, etc.....	100	80	Cooks.....	115	120
Boat engineers.....	130	130	Flunkies.....	80	70
Machinists.....	175	175	Iron-chank men.....	115	125
Machinists' helpers.....	100	95	Retort men.....	115	110
Carpenters.....	125	125	Storekeepers.....	110	100
Carpenters' helpers.....	90	85	Miscellaneous laborers.....	85	80
Pile-driver crews.....	90	90			

#### Mining Industry

Labor conditions in the mining industry in Alaska differ greatly according to the location of the mines and the character of the work. General labor in placer mining received board and from 50 to 80 cents per hour, 8 to 10 hours constituting a shift. The cost of board per day was from \$1.50 in the Cook Inlet region to \$4 in the remote parts of the Territory such as Koyukuk and Shushana. Skilled workers' wages range from \$5 per day and board for oilers in the Yentna district to \$13 per day and board for dredge masters in the Iditarod-Innoko district.

Coal miners' wages were quite uniform.

Underground coal miners and timbermen receive \$8.60 per day; underground laborers, trammers, and rope riders, \$7.80 per day; and outside labor, \$5.50 per day. Fire bosses are paid \$250 per month and foremen from \$250 to \$300 per month. Deductions from the above wages are made for board at rates of from \$1.50 to \$2 per day.



With the exception of small drift-mining operations, prospecting, and development work Alaskan placer mining is restricted to the open season—ordinarily from May or June to the freeze up in September or October. Lode mining is carried on mainly in the coastal regions of the first and third judicial districts and absorbs about 1,500 men throughout the year.

The following table shows the wage scales for the more important lode mines of the coastal regions in 1929:

TABLE 2.—WAGES IN CERTAIN ALASKAN LODI MINES, 1929

Occupation	Per 8-hour shift	Occupation	Per 8-hour shift
Machine drill men.....	\$4. 60-\$6. 00	Blacksmiths.....	\$5. 75-\$7. 00
Machine helpers.....	4. 00- 5. 00	Carpenters' helpers.....	4. 00- 5. 00
Muckers.....	4. 10- 5. 25	Blacksmiths' helpers.....	4. 00- 5. 50
Timbermen.....	5. 00- 6. 00	Hoisting engineers.....	4. 00- 5. 75
Trackmen.....	4. 50- 5. 25	Cagers.....	4. 35- 5. 25
Pipemen.....	5. 00- 5. 50	Laborers.....	3. 50- 5. 00
Carpenters.....	5. 50- 7. 00		

From the above wages deductions of \$1 to \$1.50 per day are made for board and of \$1.50 to \$2.40 per month for hospital and medical care.

Letting contracts for a considerable part of the underground work is a prevalent practice both at the larger lode mines and at the coal mines.

### Mine Wages in Idaho, 1929

AT THE close of the calendar year 1929 practically all the producing mines in Idaho were in operation with a pay roll equal to that of previous years, according to the thirty-first annual report of the mining industry of that State. Although there was a surplus of some classes of labor, a continued demand for competent miners and timbermen was reported, certain large companies having had difficulty in securing all the workers of these classes needed. The average number of men employed in the mines was 5,000, not including 1,000 additional workers who it was estimated were employed by small companies, lessees, and prospectors.

The following table gives the average wages in various occupations throughout the State for 1929 and the wage scale in effect in the Coeur d'Alene district from April 1 to December 31, 1929:

WAGES IN THE MINING INDUSTRY IN IDAHO, 1929, BY OCCUPATION

Occupation	Average wage throughout State, 1929	Wage scale in Coeur d'Alene district, Apr. 1 to Dec. 31, 1929	Occupation	Average wage throughout State, 1929	Wage scale in Coeur d'Alene district, Apr. 1 to Dec. 31, 1929
Blacksmiths.....	\$6. 00	\$6. 50	Motormen.....	\$5. 00	\$5. 50
Blacksmith helpers.....	5. 00	5. 50	Nippermen.....	4. 50	5. 25
Cagers.....	5. 25	5. 75	Ore sorters.....	4. 25	4. 75
Carmen.....	4. 50	5. 00	Pipe and track men.....	5. 25	5. 75
Carpenters.....	6. 00	6. 50	Pump and compressor men.....	5. 00	5. 75
Electrician.....	5. 50	5. 75	Shift bosses.....	6. 00	6. 75
Machinists.....	6. 00	6. 25	Shovelers.....	4. 50	5. 00
Machinists' helpers.....	5. 00	5. 50	Small hoistmen.....	5. 25	5. 75
Main hoistmen.....	5. 75	6. 25	Surface laborers.....	4. 50	5. 00
Millmen.....	5. 00	5. 50	Timber helpers.....	4. 75	5. 00
Mill repairmen.....	6. 00	6. 25	Timbermen.....	5. 50	6. 00
Mill swampers.....	4. 50	5. 00	Trainmen.....	4. 50	5. 00
Miners.....	5. 00	5. 50			

The average cost of board and lodging at company boarding houses, hotels, and at private homes is from \$1.25 to \$1.50 per day. Various companies have built homes which they are renting to their married employees and certain large companies aid their employees in home building.

### Wages and Hours of Labor in Virginia, 1928

THE industrial importance of Virginia is partially indicated by the fact that 3,886 plants in that State reported to the State Department of Labor and Industry for the year 1928 an invested capital of \$778,380,913, an output valued at \$818,714,018, pay rolls aggregating \$147,761,140,<sup>1</sup> and a personnel of 180,741.<sup>2</sup> The following tables have been compiled from the thirty-second annual report of the above-mentioned department, for the year ending September 30, 1929.

Table 1 gives the average wage rates and the average hours per day for white and for colored employees in certain specified occupations and industries in 1928:

TABLE 1.—DAILY WAGES AND HOURS OF LABOR IN VARIOUS OCCUPATIONS AND INDUSTRIES IN VIRGINIA, 1928

Industry and occupation	Number of employees		Average rates of wages		Average hours per day	
	White	Colored	White	Colored	White	Colored
<b>General contracting:</b>			<i>Per day</i>	<i>Per day</i>		
Apprentices.....	87	16	\$3.41	\$2.92	8+	9
Bricklayers.....	228	46	10.25	8.62	8+	8+
Carpenters.....	1,219	11	6.05	3.67	8+	9+
Cement workers.....	75	85	6.42	4.62	8+	8+
Electricians.....	123		6.21		8+	
Engineers.....	22		6.81		8+	
Iron workers.....	7		9.50		8	
Helpers.....	145	52	3.73	3.24	8+	8+
Hod carriers.....	41	72	4.37	3.96	8+	8+
Laborers.....	382	1,146	3.73	2.93	9+	9+
Lathers.....	28	13	5.00	4.90	8+	8+
Painters and decorators.....	60	4	3.41	3.66	8+	9
Plasterers.....	48	15	9.09	8.54	8+	8+
Sheet-metal workers.....	30		6.81		8+	
Slaters and tile setters.....	4	2	7.12	4.72	8+	8+
Steam fitters.....	4		9.50		8	
Stonemasons.....	22		10.00		8+	
Miscellaneous.....	40		7.36		8+	
<b>Painting and paper hanging:</b>						
Apprentices.....	21		3.00		8+	
Helpers.....	3	4	3.66	2.38	8+	8+
Laborers.....	11	8	3.12	3.25	8+	8+
Painters and decorators.....	346	3	6.21	3.50	8+	9+
Paper hangers.....	14		6.00		8+	
Plasterers.....		5		4.57		8+
Scrapers.....	4		3.50		8	
Miscellaneous.....	9		6.17		8	
<b>Millstone, sandstone, sand, and gravel quarries:</b>						
Blacksmiths.....	3	1	4.00	5.00	10	10
Drillers.....	5		3.00		10	
Engineers.....	18	2	4.98	3.55	9+	11
Firemen.....	17	6	3.54	3.09	10	9+
Foremen.....	10		6.58		9+	
Helpers.....	12	6	3.07	3.50	10	9+
Laborers.....	143	116	2.74	3.00	9+	9+
Loaders.....	43		2.70		10	
Superintendents.....	9		8.37		10	
Miscellaneous.....	68	6	3.62	3.81	10	10

\* As given in the report; probably a typographical error.

<sup>1</sup> Does not include figures for building trades, mines, or quarries.

<sup>2</sup> Does not include salaried help in building trades, mines, and quarries.

TABLE 1.—DAILY WAGES AND HOURS OF LABOR IN VARIOUS OCCUPATIONS AND INDUSTRIES IN VIRGINIA, 1928—Continued

Industry and occupation	Number of employees		Average rates of wages		Average hours per day	
	White	Colored	White	Colored	White	Colored
Miscellaneous ores:			<i>Per day</i>	<i>Per day</i>		
Foremen and assistants	16		\$5. 17		10	
Laborers	187	7	3. 13	\$3. 22	10	10
Miners and helpers	114		4. 18		10	
Mucklers and trammers	168		3. 07		10	
Surface employees	113		3. 35		10	
Miscellaneous	59		3. 53		10	
Miscellaneous quarrying:						
Blacksmiths	2		4. 75			
Crushermen	15	1	4. 60	3. 33	10	10
Engineers	12		4. 08		10	
Firemen	2		4. 81		10	
Foremen	6		6. 10		10	
Laborers	45		2. 82		10	
Powdermen	2		4. 16		10	
Repairmen	8		4. 81		10	
Stone quarries:						
Blacksmiths	6		4. 93		10	
Blacksmith helpers	3		3. 37		10	
Drillers	15		3. 27		10	
Engineers	2		4. 50		9+	
Firemen	3		4. 35		10	
Foremen	9		6. 07		9+	
Laborers	203	165	3. 02	3. 06	10	10
Stone crushers	2		4. 84		10	
Superintendents	3		7. 61		10	
Miscellaneous	14	3	3. 22	2. 41	10	10
Shovel operators	3		6. 17		10	
Well drillers	6	1	4. 90	2. 95	10	10
Watchmen	3		4. 04		12	
Miscellaneous	47		3. 02		10	
Slate quarries:						
Blacksmiths	1	1	4. 50	4. 25	10	10
Drillers	9		3. 25		10	
Engineers	4	8	4. 00	3. 00	10	10
Firemen	2		3. 92		10	
Foremen	2		5. 00		10	
Helpers	16	3	2. 82	2. 75	10	10
Laborers	28	51	2. 97	2. 72	10	10
Slaters	143	84	3. 67	2. 50	10	10
Miscellaneous	17	34	3. 46	2. 76	10	10
Soapstone quarries:						
Blacksmiths	1		6. 50		10	
Carpenters	12		3. 60		10	
Electricians	5		4. 85		9	
Engineers	8		4. 22		11	
Firemen	7		4. 10		12	
Foremen	61		5. 45		9+	
Laborers	352	56	2. 87	2. 88	9+	10
Machinists	24		5. 05		9	
Mill hands	2		3. 27		10	
Superintendents	2		7. 62		10	
Miscellaneous	39		3. 37		9+	
Abattoirs, meat packing, etc.:			<i>Per hour<sup>b</sup></i>	<i>Per hour<sup>b</sup></i>		
Males	488	378	.50	.35	9+	9+
Females	150	49	.39	.21	8	8+
Automobiles, accessories and repairs:						
Males	3, 100	297	.50	.33	9+	9+
Females	4		.42		8	
Bakery products:						
Males	938	329	.52	.36	9+	9+
Females	255	64	.31	.20	9	8+
Boots and shoes:						
Males	1, 588	41	.45	.28	9+	9
Females	1, 199	2	.25	.23	8+	8+
Brick and tile: Males	527	1, 002	.47	.30	9+	9+
Candy, chewing gum, etc.:						
Males	200	414	.55	.30	9+	9+
Females	153	657	.27	.16	8+	8+
Cannery products:						
Males	922	1, 150	.35	.23	8+	8+
Females	1, 356	2, 926	.20	.21	8+	8+
Cooperage, barrels, and staves:						
Males	434	886	.34	.30	9+	9+
Females	86	10	.20	.18	9	

<sup>b</sup> Only wage earners over 16 years of age in industries employing over 1,000 persons.



TABLE 1.—DAILY WAGES AND HOURS OF LABOR IN VARIOUS OCCUPATIONS AND INDUSTRIES IN VIRGINIA, 1928—Continued

Industry and occupation	Number of employees		Average rates of wages		Average hours per day	
	White	Colored	White	Colored	White	Colored
Cotton mill products:			<i>Per hour</i>	<i>Per hour</i>		
Males.....	4,489	476	\$0.33	\$0.26	9+	9+
Females.....	3,060	250	.24	.16	9+	9+
Crabs, oysters, and clams:						
Males.....	208	1,078	.40	.30	9+	9+
Females.....	19	600	.22	.22	9+	9+
Fertilizers and guano:						
Males.....	347	1,416	.48	.32	9+	9+
Females.....	1	1	.37	.20	9	9
Fish oil and fish guano: Males.....	408	745	.32	.23	10	10
Flour and grist mills: Males.....	1,680	123	.32	.25	10	10
Furniture, mattresses, etc:						
Males.....	5,384	553	.40	.30	9+	9+
Females.....	115	6	.22	.18	9+	9
Garments, including clothing, shirts and overalls:						
Males.....	584	279	.51	.31	9	9
Females.....	3,760	222	.26	.18	8+	9
Ice, artificial:						
Males.....	703	349	.46	.30	10	10
Females.....		2		.35		9+
Knitting mill products:						
Males.....	610	52	.41	.28	9	9
Females.....	1,635	247	.23	.16	9	9
Lime, cement and limestone:						
Males.....	1,216	532	.36	.30	9+	9+
Females.....		2		.32		8
Laundries:						
Males.....	607	281	.49	.29	10	10
Females.....	639	1,450	.22	.17	9+	9+
Paper and pulp mill products:						
Males.....	2,277	694	.45	.34	9	9
Females.....	101	12	.28	.25	9	9
Paper products, paper boxes, bags, and twine:						
Males.....	604	169	.44	.32	9+	9+
Females.....	679	3	.26	.21	9+	9+
Peanut cleaning establishments, coffee roasting, etc.:						
Males.....	102	401	.47	.24	10	10
Females.....	51	954	.26	.11	9+	10
Public utilities:						
Males.....	3,681	703	.40	.25	9+	9+
Females.....	10	3	.23	.25	8	9
Railroad activities:						
Males.....	10,921	1,409	.73	.47	8+	8+
Females.....		1		.39		8
Sash, doors, and blinds, including general mill work:						
Males.....	2,657	861	.43	.28	9+	9+
Females.....		4		.19		9+
Sawmill products:						
Males.....	2,218	1,675	.33	.23	10	10
Females.....		3		.24		10
Shipbuilding: Males.....	5,604	2,877	.72	.39	9	9
Silk mill products:						
Males.....	6,242	999	.52	.29	9+	9+
Females.....	4,898	27	.29	.25	9+	9+
Tannery products and tannery extracts:						
Males.....	1,155	293	.36	.35	10	10
Females.....	1		.25		10	
Tobacco and its products:						
Males.....	1,634	3,672	.53	.29	9+	9+
Females.....	4,552	5,495	.31	.16	9+	9+
Trunks, bags, etc.:						
Males.....	944	89	.34	.27	9+	9+
Females.....	139		.29		9+	
Wood products, baskets, boxes, shooks and crates:						
Males.....	1,275	2,597	.37	.25	9+	9+
Females.....	15	597	.28	.17	9	9+

In 1928 pick miners in the coal mines of Virginia were paid 40 cents to \$1.50 per ton, the average pay being 62 cents. Machine miners and helpers received from 32 cents to \$1.25 per ton, the average pay being 53 cents. The hourly rates of other underground employees in coal mines in 1928 are given in Table 2, the average for door boys and helpers being 32 cents and for foremen and assistants 78 cents.

TABLE 2.—AVERAGE RATES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS (UNDERGROUND) IN COAL MINES, 1928

Occupation	Number of employees		Average rate per hour	Average hours per day
	White	Colored		
Foremen and assistants.....	297	-----	\$0. 78	8
Fire bosses and assistants.....	25	-----	. 61	8
Timbermen.....	681	173	. 46	8
Shot firers.....	47	-----	. 51	8
Drivers and runners.....	683	135	. 44	8
Door boys and helpers.....	134	98	. 32	8
Miscellaneous.....	1, 618	54	. 49	8

In Table 3 the average rates per day and average daily hours in different occupations in iron and machinery plants for 1928 are reported.

TABLE 3.—DAILY WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS IN IRON AND MACHINERY PLANTS, 1928

Occupation	Number of employees	Average rate per day	Average hours per day	Occupation	Number of employees	Average rate per day	Average hours per day
Apprentices.....	99	\$2. 71	9	Heaters' helpers.....	36	\$3. 97	9+
Blacksmiths.....	146	5. 52	8+	Joiners.....	2	4. 08	12
Blacksmiths' helpers.....	64	3. 37	8+	Lathemen.....	54	5. 03	10
Boiler makers.....	46	5. 95	8+	Machinists.....	451	6. 14	9+
Boilermakers' helpers.....	31	3. 51	8+	Molders.....	339	5. 77	9+
Carpenters and coopers.....	73	5. 40	9	Pattern makers.....	48	6. 81	9+
Coppersmiths.....	7	7. 60	8	Pipe fitters.....	10	5. 43	8+
Draughtsmen.....	114	7. 66	9+	Puddlers.....	44	6. 98	10
Drillers.....	29	3. 97	9+	Puddlers' helpers.....	15	3. 71	10
Electricians.....	29	5. 72	9	Scrap heaters.....	6	8. 43	10
Engineers.....	37	6. 43	9+	Riggers.....	4	5. 31	8+
Firemen.....	40	4. 24	9+	Riveters and calkers.....	51	5. 13	9+
Foremen.....	147	7. 51	9+	Rollers.....	5	9. 40	11
General help (skilled).....	1, 314	4. 44	9+	Shearmen.....	38	4. 20	9+
General help (unskilled).....	1, 516	3. 01	9+	Sheet-metal workers.....	10	5. 90	8
Grinders.....	35	4. 10	9	Slaters.....	3	6. 40	8
Hammersmiths (axle).....	12	6. 05	10	Watchmen.....	47	3. 27	9+
Heaters.....	55	9. 32	9	Miscellaneous help.....	276	4. 76	8+

Table 4 records the daily rates of wages in engraving and printing for male and female employees over 16 years of age in various occupations in 1928, the average hours of work per day being 8 for each occupation.

TABLE 4.—DAILY WAGES IN SPECIFIED OCCUPATIONS IN PRINTING AND ENGRAVING, 1928

Occupation	Males		Females		Occupation	Males		Females	
	Number of employees	Average rate per day	Number of employees	Average rate per day		Number of employees	Average rate per day	Number of employees	Average rate per day
Apprentices.....	194	\$2. 70	15	\$2. 29	Foremen.....	9	\$9. 84	-----	-----
Artists.....	2	10. 88	-----	-----	Forwarders.....	5	5. 48	-----	-----
Binders.....	77	5. 48	34	2. 45	Gilders.....	13	6. 80	2	\$4. 88
Binders' help.....	40	2. 81	267	2. 41	Linotype operators.....	226	6. 75	40	3. 43
Compositors.....	378	5. 55	13	3. 21	Monotype casters.....	39	6. 86	-----	-----
Compositors' help.....	30	3. 78	3	1. 80	Monotype operators.....	-----	-----	15	4. 70
Cutters.....	56	5. 01	-----	-----	Photographers.....	11	7. 44	-----	-----
Devils.....	17	2. 00	-----	-----	Plate printers.....	22	5. 44	1	6. 76
Embossers.....	4	5. 86	12	2. 44	Pressmen.....	312	5. 46	7	4. 13
Engineers.....	13	6. 86	-----	-----	Pressmen's help.....	112	3. 37	17	2. 85
Engravers.....	61	7. 55	4	2. 24	Proof readers.....	26	5. 39	34	3. 10
Etchers.....	2	9. 52	-----	-----	Rulers.....	20	6. 13	2	5. 76
Feeders.....	55	3. 41	48	2. 50	Stereotypers.....	47	5. 83	-----	-----
Finishers.....	11	7. 24	2	2. 00	Stone polishers.....	5	4. 62	-----	-----
Firemen.....	17	3. 65	-----	-----	Transferers.....	12	7. 74	-----	-----
Folders.....	15	4. 11	41	2. 10	Miscellaneous.....	288	3. 52	87	2. 49

### Wages of Port Workers in Antwerp

**A** REPORT from United States Consul Walter S. Reineck, Antwerp, Belgium, dated April 28, 1930, gives the average wages of long-shoremen in that port as fixed by collective agreement.

A complete reorganization of the employment system among port workers was effected by a committee appointed in September, 1929, for this purpose. The committee, which consisted of 18 members representing the employers and workers, fixed a standard rate of wages on the basis of the different shifts, the wages being proportionately increased over the standard rates for certain types of cargo which are more difficult to handle.

The following table shows the standard wages for different shifts at the port of Antwerp at the close of 1929, conversions into United States currency being made on the basis of the exchange value of the franc for 1929—2.78 cents:

	Week days	Sun- days and holidays		Week days	Sun- days and holidays
Ordinary day shift.....	\$1. 78	\$3. 17	Morning shift (6 a. m. to 2 p. m.)....	\$1. 92	\$3. 36
Overtime (5 p. m. to 8 p. m.).....	1. 00	1. 17	Afternoon shift (2 p. m. to 8 p. m.)..	2. 06	3. 60
Overtime (5 p. m. to 9 p. m.).....	1. 33	1. 56	Night shift.....	2. 67	-----

A cooperative society—"Centrale des Employeurs au Port d' Anvers"—was also formed, made up of the various classes of workers. The funds of the society are raised by means of a special tax on all invoices relating to the handling of cargo at the port. The purpose of the society is to advance the interests of the members, particularly in the field of insurance, and cooperation between this organization and the wage committee is expected to result in general improvement in the working conditions at the port.

### Wages and Labor Conditions on Brazilian Coffee Plantations

**A** REPORT entitled "The Coffee Industry in Brazil," issued recently by the United States Bureau of Foreign and Domestic Commerce as No. 92 of its trade promotion series of publications, contains a brief discussion of wages and labor conditions on coffee plantations in that country.

Up to 1888, when slavery was abolished in Brazil, the coffee plantations had been worked largely by slaves—Africans and their descendants. During the period of transition to free labor the large land owners were apprehensive that they would not be able to maintain their agricultural establishments under the new conditions. A few of the more progressive ones, however, believed in the future of a coffee industry maintained by free labor, and feeling that immigration would be their salvation, organized a society for the promotion of immigration (*Sociedade Promotora de Imigração*). Dating from that time, the importance of inducing farm labor to come to Brazil has been recognized and, it is said, large sums of money have been spent to encourage immigration.



The report estimates that in Sao Paulo, the chief coffee-producing State, there are about 250,000 "effective coffee laborers. These, together with the women, children, minor unmarried workers and widowers, foremen, overseers, and administrators, make a probable total of about 1,000,000." It is estimated that about 45,000 laborers leave the coffee plantations each year for various reasons, but the number of departures is probably largely offset by arrivals of immigrants, although not all of these go to work on the plantations. The number of immigrants entering Sao Paulo in 1926, the latest date for which figures on this point are given in the report, was 96,126. It has been difficult to find immigrants of the true agricultural type, but the report points out that such labor "is scarce the world over, except in the Far East," and that "undoubtedly the truth of the matter is that the real scarcity of labor in many agricultural regions is due to competition from the new coffee districts and from other industries, rather than to an actual shortage of hands."

According to the report, the plantations in Sao Paulo are "for the most part cultivated by 'colonos.' These may be of any nationality, Italians, Portuguese, Spaniards predominating, and are of the immigrant class more recently arrived, being, consequently, of less mixed blood." The usual colono family, consisting of parents and two or three children, is said to be able to take care of from 3,000 to 5,000 coffee trees through the year, some additional labor being required at picking time.

Each family that remains on a plantation is supplied a relatively comfortable house of three or four rooms with a kitchen and running water (generally carried in a canal) nearby. As a rule, the colonos are permitted to keep pigs, and, in some cases, goats, a milch cow, and a saddle animal.

At the time the report was prepared (apparently in the early part of 1928) the colonos were being paid at an annual rate of from 200 to 500 milreis (\$24 to \$60) per 1,000 trees cultivated. Additional pay is given for picking, the rate being "600 reis to 2\$500 per 50 liters (from 7 cents to 30 cents per 45 quarts, dry measure) of cherries gathered." In case of a shortage of colonos, necessitating the employment of day labor for cultivation, the rates "are likely to be from 25 to 30 per cent higher." Where the labor shortage has been acute, the colonos have been contracted on a system which gives them half of the crop instead of money wages for their work (including picking). Wages are paid three times a year, although in special cases they may be paid as often as once a month.

Wherever new trees are planted it is customary to permit the planting of "catch" crops, such as cereals and beans, between the rows. This custom has resulted in a movement of the colonos from the older to the newer districts, which has created a serious problem, according to the report. Where catch-crop planting is allowed, the wages paid for the care of the coffee trees are about 25 per cent less than the rates quoted. Where catch-crop planting is not permitted, separate land is often given to the colono for his private cultivation. For example, at one fazenda  $4\frac{1}{2}$  acres of free land are allowed for each 10,000 trees cultivated.

Occasionally the colonos strike for higher wages or better treatment, the strikes generally occurring just before the picking season, when

they are more likely to be successful. However, owing to the organization of the plantation owners for the fixing of wage scales, such strikes are becoming less frequent.

### **Eight-Hour Bill Before English Parliament <sup>1</sup>**

**I**N APRIL the English Government introduced a bill intended to carry out the principles of the Washington Convention as to hours of employment. Under its terms the ordinary working hours of an industrial worker would be limited to 8 a day and 48 a week. Variations would be allowed as follows:

- (a) Workers who are employed for less than 8 hours on any day of the week may be employed up to 9 hours on all or any of the other days, subject to the weekly maximum of 48 hours.
- (b) The hours of shift workers may be so arranged as to average not more than 48 hours over two or over three weeks.
- (c) The employment of workers upon continuous processes may extend to 56 hours weekly upon an average taken over three weeks.

These three conditions embody what are termed the statutory hours, or statutory limits. The daily hours might be modified by agreement between organized employers and organized workers, subject to a weekly average of not over 48 hours. Under this provision the 5-day week would be permitted. Preparatory and complementary work and work which is essentially intermittent might be permitted outside the statutory limits. Overtime would be allowed in order to deal with pressure of work which could not be handled within the ordinary working hours of the workers available, but it would have to be paid for at not less than time and a quarter, and must not exceed 32 hours in any period of 28 days; this maximum might be varied by a ministerial regulation or order. In case of accidents and other emergencies the restrictions upon working hours would not apply, and in times of national emergency the bill might be suspended entirely. Special provision is made to secure to the railroad workers the hours they now enjoy.

Before making any order or regulation under the bill, the minister is required to consult organizations representing employers and workpeople affected; and in the case of persons to whom Part IV of the railways act, 1921, applies, no such order or regulation may be made except in accordance with a recommendation by the railway companies and the railway trade-unions jointly, or by the central or national wages board. All regulations and orders are to be laid before both houses of Parliament.

The bill would not apply to members of the employer's family, where these are the only employees, to persons engaged in supervisory, managerial or confidential capacities, to clerical workers, to home workers, to persons employed underground in coal mines, or to persons employed at sea or in agriculture.

"Working hours" are defined as the time during which the person employed is at the place of work and at the disposal of the employer, exclusive of intervals allowed for rest or meals or occasioned by weather conditions.

It is provided that shorter hours or higher rates of wages secured by custom or agreement should not be affected by the bill.

<sup>1</sup> The data on which this article is based are from the Manchester (England) Guardian, Apr. 21, 1930, p. 14; and Great Britain, Ministry of Labor Gazette, May, 1930, p. 165.

**The Dismissal Wage—a Correction.**

In the April, 1930, issue of the Labor Review (p. 2) reference was made to the dismissal-wage plan of the Firestone Tire & Rubber Co. This reference was based on a statement in an article by Glenn A. Bowers in *Factory and Industrial Management* for March, 1930. Mr. Bowers has informed the bureau that the dismissal-wage plan referred to in his article should have been attributed to the Goodyear Tire & Rubber Co. instead of to the Firestone Tire & Rubber Co.



# TREND OF EMPLOYMENT

## Summary for May, 1930

**E**MPLOYMENT decreased 0.9 per cent in May, 1930, as compared with April, and pay-roll totals decreased 1.2 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both April and May, together with the per cent of change in May, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, APRIL AND MAY, 1930

Industrial group	Estab- lish- ments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
1. Manufacturing .....	13, 853	3, 412, 506	3, 362, 565	<sup>1</sup> - 1.6	\$91, 894, 663	\$89, 863, 530	<sup>1</sup> - 2.4
2. Coal mining .....	1, 529	306, 767	307, 529	+ 0.2	7, 217, 858	7, 736, 465	+ 7.2
Anthracite .....	153	86, 817	96, 761	+11.5	2, 412, 039	3, 175, 815	+31.7
Bituminous .....	1, 376	219, 950	210, 768	- 4.2	4, 805, 819	4, 560, 650	- 5.1
3. Metalliferous mining .....	351	55, 696	54, 608	- 2.0	1, 654, 620	1, 603, 032	- 3.1
4. Quarrying and nonme- talic mining .....	747	37, 627	39, 105	+ 3.9	974, 328	1, 028, 502	+ 5.6
5. Crude petroleum pro- duction .....	176	21, 555	22, 278	+ 3.4	797, 144	786, 147	- 1.4
6. Public utilities .....	10, 850	758, 355	767, 907	+ 1.3	23, 004, 566	23, 075, 077	+ 0.3
Telephone and tele- graph .....	7, 456	349, 005	351, 657	+ 0.8	9, 949, 288	9, 927, 607	- 0.2
Power, light, and water .....	2, 916	252, 644	259, 507	+ 2.7	8, 021, 783	8, 171, 510	+ 1.9
Electric railroad opera- tion and maintenance, exclusive of car shops .....	478	156, 706	156, 743	+ (2)	5, 033, 495	4, 975, 960	- 1.1
7. Trade .....	9, 172	315, 011	313, 310	- 0.5	8, 014, 030	7, 991, 779	- 0.3
Wholesale .....	2, 154	67, 731	67, 410	- 0.5	2, 137, 599	2, 127, 072	- 0.5
Retail .....	7, 018	247, 280	245, 900	- 0.6	5, 876, 431	5, 864, 707	- 0.2
8. Hotels .....	2, 018	164, 726	161, 235	- 2.1	<sup>2</sup> 2, 820, 235	<sup>2</sup> 2, 765, 477	- 1.9
9. Canning and preserving .....	726	39, 712	34, 879	- 12.2	700, 911	646, 223	- 7.8
<b>Total .....</b>	<b>39, 422</b>	<b>5, 111, 955</b>	<b>5, 063, 416</b>	<b>- 0.9</b>	<b>137, 078, 355</b>	<b>135, 496, 232</b>	<b>- 1.2</b>

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England <sup>4</sup> .....	2, 954	473, 466	467, 588	- 1.2	11, 720, 312	11, 507, 593	- 1.8
Middle Atlantic <sup>4</sup> .....	7, 092	1, 473, 160	1, 468, 295	- 0.3	41, 524, 279	41, 499, 294	- 0.1
East North Central <sup>6</sup> .....	8, 924	1, 502, 912	1, 496, 516	- 0.4	44, 040, 133	43, 570, 731	- 1.1
West North Central <sup>7</sup> .....	4, 333	320, 694	320, 146	- 0.2	8, 283, 881	8, 229, 350	- 0.7
South Atlantic <sup>8</sup> .....	4, 485	514, 070	500, 251	- 2.7	10, 806, 899	10, 477, 053	- 3.1
East South Central <sup>9</sup> .....	2, 328	218, 218	213, 334	- 2.2	4, 322, 149	4, 182, 678	- 3.2
West South Central <sup>10</sup> .....	2, 963	206, 310	203, 398	- 1.4	5, 097, 227	4, 977, 155	- 2.4
Mountain <sup>11</sup> .....	1, 544	99, 217	97, 006	- 2.2	2, 797, 168	2, 727, 271	- 2.5
Pacific <sup>12</sup> .....	4, 799	303, 908	296, 882	- 2.3	8, 486, 307	8, 325, 107	- 1.9
<b>All divisions .....</b>	<b>39, 422</b>	<b>5, 111, 955</b>	<b>5, 063, 416</b>	<b>- 0.9</b>	<b>137, 078, 355</b>	<b>135, 496, 232</b>	<b>- 1.2</b>

<sup>1</sup> Weighted per cent of change for the combined 54 manufacturing industries repeated from Table 2, p. 177; the remaining per cents of change, including total, are unweighted.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Cash payments only; see text, p. 198.

<sup>4</sup> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

<sup>5</sup> New Jersey, New York, Pennsylvania.

<sup>6</sup> Illinois, Indiana, Michigan, Ohio, Wisconsin.

<sup>7</sup> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

<sup>8</sup> Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

<sup>9</sup> Alabama, Kentucky, Mississippi, Tennessee.

<sup>10</sup> Arkansas, Louisiana, Oklahoma, Texas.

<sup>11</sup> Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

<sup>12</sup> California, Oregon, Washington.

The changes in employment in the 13 industrial groups in May—6 increases and 7 decreases—followed the most general seasonal trends, with the possible exceptions of the decreases in metalliferous mining and wholesale trade.

The figures of the several industrial groups are not weighted according to the relative importance of each industry, as shown by the United States Census, and therefore the per cents of change shown for the total figures represent only the changes in the establishments reporting. (Compare note 1, manufacturing industries, summary table, p. 173.)

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of March and April, instead of for April and May, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Mar. 15, 1930	Apr. 15, 1930		March, 1930	April, 1930	
Class I railroads.....	1, 529, 729	1, 555, 692	+1.7	\$218, 991, 401	\$217, 704, 696	-0.6

The total number of employees included in this summary is 6,619,108, whose combined earnings in one week amounted to approximately \$185,000,000.

### 1. Employment in Selected Manufacturing Industries in May, 1930

#### Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, April and May, 1930

**E**MPLOYMENT in manufacturing industries decreased 1.6 per cent in May as compared with April, and pay-roll totals decreased 2.4 per cent. As the trend of employment from April to May has been downward in five of the seven years preceding 1930, the decline this year is not unusual.

The per cents of change in May in employment and pay-roll totals in manufacturing industries are based upon returns made by 13,388 establishments in 54 of the principal manufacturing industries of the United States. These establishments in May, 1930, had 3,271,015 employees, whose combined earnings in one week were \$87,477,094.

The bureau's weighted index of employment for May, 1930, is 87.7, as compared with 89.1 for April, 1930, 89.8 for March, 1930, and 99.2 for May, 1929; the index of pay-roll totals for May, 1930, is 87.6, as compared with 89.8 for April, 1930, 90.8 for March, 1930, and 104.8 for May, 1929. The monthly average for 1926 equals 100.0.

Four of the twelve groups of industries (food, tobacco, stone-clay-glass, and vehicles) showed employment gains in May, the food and the tobacco groups also reporting increased earnings.

Fifteen of the fifty-four industries had more employees in May than in April, the greatest gains having been in the ice cream, woolen and worsted goods, cement, brick, rubber tire, and sugar refining industries. The automobile industry reported an increase of 1.5 per cent in employment and a gain of 0.8 per cent in earnings. Each of the 15 industries reporting increased employment also showed increased pay-roll totals with the exception of newspaper printing, which coupled a small gain in employment with a slight decrease in earnings.

The outstanding decrease in employment in May was a seasonal one of 41.7 per cent in fertilizers, marking the close of the spring shipping season. Nine of the ten industries of the textile group had fewer employees in May than in April. The following industries of great manufacturing importance—electrical machinery, steam-railroad car building, boots and shoes, and foundries—showed decreases in employment ranging from 1.0 to 3.9 per cent. Employment in the iron and steel industry remained practically unchanged, a decline of one-tenth of 1 per cent in employment occurring between April and May.

The bureau collects monthly employment data for six industries—rayon, radio, aircraft, jewelry, paint, and rubber goods (other than rubber boots, shoes, tires, and tubes)—which have not yet been included in the indexes of employment and pay-roll totals for manufacturing industries. Increased employment in May over April was shown in the radio and paint industries, the remaining four industries reporting a drop in number of employees in May.

The Mountain geographic division alone reported an increase in employment (4.0 per cent), the remaining eight divisions showing decreases in employment ranging from 0.2 to 3 per cent in May.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1930, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
<b>Food and kindred products.....</b>	<b>1, 974</b>	<b>231, 401</b>	<b>232, 913</b>	(1)	<b>\$6, 066, 755</b>	<b>\$6, 146, 315</b>	(1)
Slaughtering and meat packing.....	218	87, 216	87, 721	+0. 6	2, 322, 759	2, 347, 813	+1. 1
Confectionery.....	341	36, 115	34, 865	-3. 5	696, 205	660, 944	-5. 1
Ice cream.....	340	13, 429	15, 204	+13. 2	451, 429	513, 962	+13. 9
Flour.....	342	15, 112	14, 976	-0. 9	413, 742	403, 466	-2. 5
Baking.....	717	68, 442	68, 757	+0. 5	1, 864, 520	1, 871, 997	+0. 4
Sugar refining, cane.....	16	11, 087	11, 390	+2. 7	318, 100	348, 133	+9. 4
<b>Textiles and their products.....</b>	<b>2, 492</b>	<b>596, 861</b>	<b>578, 097</b>	(1)	<b>11, 179, 285</b>	<b>10, 506, 711</b>	(1)
Cotton goods.....	473	192, 991	186, 404	-3. 4	2, 910, 471	2, 753, 764	-5. 4
Hosiery and knit goods.....	365	95, 346	94, 205	-1. 2	1, 744, 501	1, 623, 711	-6. 9
Silk goods.....	292	65, 763	61, 639	-6. 3	1, 317, 599	1, 188, 197	-9. 8
Woolen and worsted goods.....	190	51, 147	54, 152	+5. 9	1, 041, 339	1, 189, 694	+14. 2
Carpets and rugs.....	30	22, 387	20, 437	-8. 7	482, 761	417, 455	-13. 5
Dyeing and finishing textiles.....	120	34, 453	33, 341	-3. 2	844, 998	793, 289	-6. 1
Clothing, men's.....	355	63, 059	60, 505	-4. 1	1, 221, 785	1, 116, 524	-8. 6
Shirts and collars.....	119	21, 053	19, 741	-6. 2	304, 587	269, 295	-11. 6
Clothing, women's.....	423	34, 595	32, 953	-4. 7	935, 777	831, 898	-11. 1
Millinery and lace goods.....	125	16, 067	14, 720	-8. 4	375, 467	322, 884	-14. 0
<b>Iron and steel and their products.....</b>	<b>2, 005</b>	<b>694, 260</b>	<b>685, 423</b>	(1)	<b>20, 918, 368</b>	<b>20, 265, 346</b>	(1)
Iron and steel.....	206	270, 355	270, 153	-0. 1	8, 607, 896	8, 401, 467	-2. 4
Cast-iron pipe.....	39	11, 270	11, 340	+0. 6	272, 648	275, 207	+0. 9
Structural ironwork.....	180	29, 921	30, 170	+0. 8	905, 201	906, 388	+0. 1

See footnotes at end of table.



TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1930, BY INDUSTRIES—Continued

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
<b>Iron and steel and their prod- ucts—Continued.</b>							
Foundry and machine-shop products.....	1, 105	266, 556	259, 889	-2.5	\$8, 006, 448	\$7, 618, 775	-4.8
Hardware.....	73	29, 150	28, 724	-1.5	666, 133	651, 534	-2.2
Machine tools.....	154	35, 071	34, 060	-2.9	1, 048, 833	1, 001, 448	-4.5
Steam fittings and steam and hot-water heating apparatus.....	112	31, 067	30, 557	-1.6	861, 957	818, 809	-5.0
Stoves.....	136	20, 870	20, 530	-1.6	549, 252	531, 718	-3.2
<b>Lumber and its products.....</b>	<b>1, 433</b>	<b>211, 288</b>	<b>208, 834</b>	( <sup>1</sup> )	<b>4, 543, 137</b>	<b>4, 513, 030</b>	( <sup>1</sup> )
Lumber, sawmills.....	658	125, 269	124, 848	-0.3	2, 621, 903	2, 615, 576	-0.2
Lumber, millwork.....	354	29, 800	29, 948	+0.5	701, 582	721, 351	+2.8
Furniture.....	421	56, 219	54, 038	-3.9	1, 219, 652	1, 176, 103	-3.6
<b>Leather and its products.....</b>	<b>460</b>	<b>141, 714</b>	<b>136, 736</b>	( <sup>1</sup> )	<b>2, 935, 426</b>	<b>2, 718, 574</b>	( <sup>1</sup> )
Leather.....	134	27, 015	26, 561	-1.7	660, 761	655, 685	-0.8
Boots and shoes.....	326	114, 699	110, 175	-3.9	2, 274, 665	2, 062, 889	-9.3
<b>Paper and printing.....</b>	<b>1, 267</b>	<b>217, 441</b>	<b>217, 112</b>	( <sup>1</sup> )	<b>7, 362, 133</b>	<b>7, 343, 959</b>	( <sup>1</sup> )
Paper and pulp.....	207	59, 216	58, 991	-0.4	1, 619, 825	1, 596, 561	-1.4
Paper boxes.....	191	18, 905	18, 581	-1.7	429, 666	418, 920	-2.5
Printing, book and job.....	428	56, 000	56, 134	+0.2	1, 916, 846	1, 943, 351	+1.4
Printing, newspapers.....	441	83, 320	83, 406	+0.1	3, 395, 796	3, 385, 127	-0.3
<b>Chemicals and allied products.....</b>	<b>413</b>	<b>120, 896</b>	<b>111, 891</b>	( <sup>1</sup> )	<b>3, 547, 322</b>	<b>3, 387, 267</b>	( <sup>1</sup> )
Chemicals.....	157	38, 936	38, 764	-0.4	1, 094, 138	1, 088, 611	-0.5
Fertilizers.....	175	18, 618	10, 863	-41.7	340, 712	215, 519	-36.7
Petroleum refining.....	81	63, 342	62, 264	-1.7	2, 112, 472	2, 083, 137	-1.4
<b>Stone, clay, and glass products.....</b>	<b>1, 062</b>	<b>126, 445</b>	<b>127, 061</b>	( <sup>1</sup> )	<b>3, 209, 765</b>	<b>3, 203, 733</b>	( <sup>1</sup> )
Cement.....	117	23, 565	24, 848	+5.4	700, 422	737, 946	+5.4
Brick, tile, and terra cotta.....	675	35, 921	37, 263	+3.7	842, 154	870, 509	+3.4
Pottery.....	127	20, 424	19, 475	-4.6	484, 957	439, 441	-9.4
Glass.....	143	46, 535	45, 475	-2.3	1, 182, 232	1, 155, 837	-2.2
<b>Metal products, other than iron and steel.....</b>	<b>244</b>	<b>50, 656</b>	<b>49, 625</b>	( <sup>1</sup> )	<b>1, 287, 445</b>	<b>1, 221, 644</b>	( <sup>1</sup> )
Stamped and enameled ware.....	77	18, 299	17, 850	-2.5	428, 080	399, 210	-6.7
Brass, bronze, and copper products.....	167	32, 357	31, 775	-1.8	859, 365	822, 434	-4.3
<b>Tobacco products.....</b>	<b>226</b>	<b>59, 555</b>	<b>60, 328</b>	( <sup>1</sup> )	<b>910, 436</b>	<b>964, 839</b>	( <sup>1</sup> )
Chewing and smoking tobacco and snuff.....	27	8, 894	8, 753	-1.6	144, 476	142, 433	-1.4
Cigars and cigarettes.....	199	50, 661	51, 575	+1.8	765, 960	822, 406	+7.4
<b>Vehicles for land transporta- tion.....</b>	<b>1, 294</b>	<b>524, 929</b>	<b>528, 696</b>	( <sup>1</sup> )	<b>17, 662, 095</b>	<b>17, 020, 787</b>	( <sup>1</sup> )
Automobiles.....	215	364, 421	369, 810	+1.5	12, 063, 473	12, 155, 982	+0.8
Carriages and wagons.....	53	1, 357	1, 324	-2.4	30, 967	30, 357	-2.0
Car building and repairing, electric-railroad.....	455	29, 451	29, 143	-1.0	935, 941	922, 093	-1.5
Car building and repairing, steam-railroad.....	571	129, 700	128, 421	-1.0	4, 031, 714	3, 912, 355	-3.0
<b>Miscellaneous industries.....</b>	<b>983</b>	<b>437, 060</b>	<b>425, 847</b>	( <sup>1</sup> )	<b>12, 872, 496</b>	<b>12, 631, 325</b>	( <sup>1</sup> )
Agricultural implements.....	90	30, 630	28, 590	-6.7	895, 293	783, 722	-12.5
Electrical machinery, appa- ratus and supplies.....	211	199, 858	192, 278	-3.8	6, 196, 278	6, 017, 690	-2.9
Pianos and organs.....	71	6, 514	6, 288	-3.5	184, 688	181, 216	-1.9
Rubber boots and shoes.....	11	17, 226	15, 649	-9.2	393, 289	358, 874	-8.8
Automobile tires.....	43	47, 804	49, 116	+2.7	1, 537, 129	1, 585, 890	+3.2
Shipbuilding.....	92	43, 707	42, 376	-3.0	1, 322, 954	1, 317, 497	-0.4
Rayon <sup>2</sup> .....	17	24, 463	23, 798	-2.7	504, 840	510, 887	+1.2
Radio <sup>2</sup> .....	37	14, 269	15, 669	+9.8	393, 912	436, 920	+10.9
Aircraft <sup>2</sup> .....	48	10, 277	10, 029	-2.4	342, 679	335, 560	-2.1
Jewelry <sup>2</sup> .....	120	13, 369	13, 089	-2.1	331, 717	329, 891	-0.6
Paints and varnishes <sup>2</sup> .....	171	13, 614	13, 698	+0.6	384, 382	396, 277	+3.1
Rubber goods, other than rubber boots, shoes, tires and tubes <sup>2</sup> .....	72	15, 329	15, 267	-0.4	385, 335	376, 901	-2.2
<b>All industries.....</b>	<b>13, 853</b>	<b>3, 412, 506</b>	<b>3, 362, 565</b>	( <sup>1</sup> )	<b>91, 894, 663</b>	<b>89, 863, 530</b>	( <sup>1</sup> )

See footnotes at end of table.

**TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1930, BY INDUSTRIES—Continued****RECAPITULATION BY GEOGRAPHIC DIVISIONS**

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
GEOGRAPHIC DIVISION <sup>3</sup>							
New England.....	1,552	377,045	368,181	-2.4	\$8,908,617	\$8,636,486	-3.1
Middle Atlantic.....	3,562	977,973	959,875	-1.9	27,784,853	26,958,712	-3.0
East North Central.....	3,369	1,136,080	1,129,915	-0.5	33,928,528	33,507,377	-1.2
West North Central.....	1,215	179,484	177,877	-0.9	4,684,832	4,627,656	-1.2
South Atlantic.....	1,644	348,384	339,218	-2.6	6,960,325	6,719,167	-3.5
East South Central.....	656	126,132	122,291	-3.0	2,445,796	2,322,179	-5.1
West South Central.....	783	107,514	104,261	-3.0	2,570,313	2,467,170	-4.0
Mountain.....	257	31,073	32,321	+4.0	898,315	914,328	+1.8
Pacific.....	815	128,821	128,626	-0.2	3,713,084	3,710,455	-0.1
All divisions.....	13,853	3,412,506	3,362,565	(1)	91,894,663	89,863,530	(1)

<sup>1</sup> The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

<sup>2</sup> The rayon industry was surveyed for the first time for the January-February, 1929, comparison, the radio industry for the March-April, 1929, comparison, the aircraft, jewelry, and paint and varnish industries for the February-March, 1930, comparison, and the rubber goods industry for the March, April, 1930, comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 174, do not include rayon, radio, aircraft, jewelry, paint and varnish, or rubber goods.

<sup>3</sup> See footnotes 4 to 12, p. 173.

**TABLE 2.—PER CENT OF CHANGE, APRIL TO MAY, 1930—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES**

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change April to May, 1930		Group	Per cent of change April to May, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	+0.6	+0.9	Stone, clay, and glass products..	+0.6	-0.3
Textiles and their products.....	-3.2	-6.0	Metal products, other than iron and steel.....	-2.0	-5.0
Iron and steel and their pro- ducts.....	-1.4	-3.6	Tobacco products.....	+1.4	+6.4
Lumber and its products.....	-1.2	-0.7	Vehicles for land transportation..	+0.2	-0.9
Leather and its products.....	-3.5	-7.4	Miscellaneous industries.....	-3.1	-2.5
Paper and printing.....	-0.1	-0.2			
Chemicals and allied products..	-8.6	-4.9	<b>All industries.....</b>	<b>-1.6</b>	<b>-2.4</b>

**Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, May, 1930, and May, 1929**

THE level of employment in manufacturing industries in May, 1930, was 11.6 per cent lower than in May, 1929.

Five industries (ice cream, sugar refining, newspaper printing, chewing tobacco, and shipbuilding) reported increased employment and earnings over the 12-month interval. Slaughtering, cast-iron pipe, and petroleum refining each showed a gain in pay-roll totals in May, 1930, over May, 1929.

Twenty-six industries showed decreases of from 10 to 28.6 per cent in employment from May, 1929, to May, 1930, the decrease over the year interval in a great number of cases being due to the unusually high level reached by these industries in May, 1929.

The outstanding decreases in employment over the year period were in pianos, automobiles, tires, carriages, millwork, brass, woolen and worsted goods, carpets, brick, agricultural implements, and machine tools. The cotton goods industry showed a drop of 13.4 per cent in number of employees and the iron and steel industry decreased 6.6 per cent.

Decreased employment and earnings were shown in each of the nine geographic divisions, the East North Central division showing the largest decreases, due chiefly to changed conditions in the automobile industry.





Industry	In- stall- ments	1930		Per cent of change	1930		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
<b>Iron and steel and their products—Continued.</b>							
Foundry and machine-shop products.....	1,105	266,556	259,889	-2.5	\$8,006,448	\$7,618,775	-4.8
Hardware.....	73	29,150	28,724	-1.5	666,133	651,534	-2.2
Machine tools.....	154	35,071	34,060	-2.9	1,048,833	1,001,448	-4.5
Steam fittings and steam and hot water circulating equipment	112	51,002	50,002	-1.0	561,967	518,809	-5.0
Stoves.....	136	20,870	20,530	-1.6	549,252	531,718	-3.2
<b>Lumber and its products</b>	<b>1,438</b>	<b>311,398</b>	<b>298,834</b>	<b>(1)</b>	<b>4,543,187</b>	<b>4,313,030</b>	<b>(1)</b>
Lumber, sawmills.....	658	125,290	124,448	-0.8	2,631,903	2,618,576	-0.2
Lumber, millwork.....	354	29,800	29,948	+0.5	701,082	721,351	+2.8
Furniture.....	421	56,219	54,038	-3.9	1,219,692	1,178,103	-3.4
<b>Leather and its products</b>	<b>448</b>	<b>141,714</b>	<b>138,780</b>	<b>(1)</b>	<b>2,894,498</b>	<b>2,718,574</b>	<b>(1)</b>
Leather.....	134	37,015	36,561	-1.7	689,761	655,685	-4.8
Boots and shoes.....	326	114,699	110,175	-3.9	2,274,685	2,062,889	-9.3
<b>Paper and printing</b>	<b>1,363</b>	<b>397,641</b>	<b>392,182</b>	<b>(1)</b>	<b>3,888,128</b>	<b>3,843,960</b>	<b>(1)</b>
Paper and pulp.....	207	59,216	58,961	-0.4	1,618,825	1,598,561	-1.4
Paper boxes.....	191	18,983	18,561	-1.7	439,666	418,930	-4.8
Printing, book and job.....	428	38,680	38,134	-1.4	1,918,845	1,943,351	+1.4
Printing, newspapers.....	441	82,222	82,486	+0.1	3,368,796	3,365,127	-0.1
<b>Chemicals and allied products</b>	<b>413</b>	<b>179,680</b>	<b>181,681</b>	<b>(1)</b>	<b>2,547,327</b>	<b>2,597,367</b>	<b>(1)</b>
Chemicals.....	187	38,906	38,764	-0.4	1,094,128	1,088,611	-0.5
Fertilizers.....	175	18,618	18,863	+1.7	340,712	318,519	-6.7
Petroleum refining.....	81	63,342	62,264	-1.7	2,112,472	2,088,137	-1.4
<b>Stone, clay, and glass products</b>	<b>1,662</b>	<b>198,445</b>	<b>187,681</b>	<b>(1)</b>	<b>2,369,765</b>	<b>2,363,733</b>	<b>(1)</b>
Cement.....	117	23,595	24,848	+5.4	700,422	737,946	+5.4
Brick, tile, and terra cotta.....	676	38,921	37,263	-4.3	842,164	870,500	+3.4
Pottery.....	127	20,424	19,475	-4.6	484,957	439,441	-9.4
Glass.....	143	46,535	45,475	-2.3	1,182,232	1,155,837	-2.2
<b>Metal products, other than iron and steel</b>	<b>344</b>	<b>59,638</b>	<b>49,625</b>	<b>(1)</b>	<b>1,387,445</b>	<b>1,221,644</b>	<b>(1)</b>
Stamped and enameled ware.....	77	18,290	17,850	-2.5	428,080	399,210	-6.7
Brass, bronze, and copper products.....	167	32,357	31,775	-1.8	859,365	822,434	-4.3
<b>Tobacco products</b>	<b>226</b>	<b>59,545</b>	<b>60,338</b>	<b>(1)</b>	<b>919,436</b>	<b>964,839</b>	<b>(1)</b>
Chewing and smoking tobacco and snuff.....	27	8,894	8,753	-1.6	144,476	142,433	-1.4
Cigars and cigarettes.....	199	50,661	51,575	+1.8	765,960	822,406	+7.4
<b>Vehicles for land transportation</b>	<b>1,294</b>	<b>534,929</b>	<b>538,698</b>	<b>(1)</b>	<b>17,063,065</b>	<b>17,030,787</b>	<b>(1)</b>
Automobiles.....	215	364,421	369,810	+1.5	12,063,473	12,155,982	+0.8
Carriages and wagons.....	53	1,357	1,324	-2.4	30,967	30,357	-2.0
Car building and repairing, electric-railroad.....	455	29,451	29,143	-1.0	935,941	922,093	-1.5
Car building and repairing, steam-railroad.....	571	129,700	128,421	-1.0	4,031,714	3,912,355	-3.0
<b>Miscellaneous industries</b>	<b>983</b>	<b>437,060</b>	<b>425,847</b>	<b>(1)</b>	<b>12,872,496</b>	<b>12,631,325</b>	<b>(1)</b>
Agricultural implements.....	90	30,630	28,590	-6.7	895,293	783,722	-12.5
Electrical machinery, apparatus and supplies.....	211	199,858	192,278	-3.8	6,196,278	6,017,690	-2.9
Pianos and organs.....	71	6,514	6,288	-3.5	184,688	181,216	-1.9
Rubber boots and shoes.....	11	17,226	15,649	-9.2	393,289	358,874	-8.8
Automobile tires.....	43	47,804	49,116	+2.7	1,537,129	1,585,890	+3.2
Shipbuilding.....	92	43,707	42,376	-3.0	1,322,954	1,317,497	-0.4
Rayon <sup>1</sup> .....	17	24,463	23,798	-2.7	504,840	510,887	+1.2
Radio <sup>1</sup> .....	37	14,269	15,669	+9.8	393,912	436,920	+10.9
Aircraft <sup>1</sup> .....	48	10,277	10,029	-2.4	342,679	335,560	-2.1
Jewelry <sup>1</sup> .....	120	13,369	13,089	-2.1	331,717	329,891	-0.6
Paints and varnishes <sup>1</sup> .....	171	13,614	13,608	+0.0	384,382	396,277	+3.1
Rubber goods, other than rubber boots, shoes, tires and tubes <sup>1</sup> .....	72	15,329	15,267	-0.4	385,335	376,901	-2.2
<b>All industries</b>	<b>13,853</b>	<b>3,412,506</b>	<b>3,383,565</b>	<b>(1)</b>	<b>91,884,643</b>	<b>89,663,530</b>	<b>(1)</b>

See footnotes at end of table.

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
GEOGRAPHIC DIVISION <sup>3</sup>							
New England.....	1,552	377,045	368,181	-2.4	\$8,908,617	\$8,636,486	-3.1
Middle Atlantic.....	3,562	977,973	959,875	-1.9	27,784,853	26,958,712	-3.0
East North Central.....	3,369	1,136,080	1,129,915	-0.5	33,928,528	33,507,377	-1.2
West North Central.....	1,644	348,384	339,218	-2.6	6,960,325	6,719,167	-3.5
South Atlantic.....	656	126,132	122,291	-3.0	2,445,796	2,322,179	-5.1
East South Central.....	783	167,514	164,261	-3.0	2,570,313	2,467,179	-4.0
West South Central.....	257	31,673	32,321	+4.0	898,315	914,328	+1.8
Mountain.....	815	128,821	128,626	-0.2	3,713,064	3,710,465	-0.1
Pacific.....							
All divisions.....	12,523	3,412,386	3,382,363	(1)	91,484,063	89,863,539	(1)

<sup>1</sup> The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

<sup>2</sup> The rayon industry was surveyed for the first time for the January-February, 1929, comparison, the radio industry for the March-April, 1929, comparison, the aircraft, jewelry, and paint and varnish industries for the February-March, 1930, comparison, and the rubber goods industry for the March, April, 1930, comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 174, do not include rayon, radio, aircraft, jewelry, paint and varnish, or rubber goods.

<sup>3</sup> See footnotes 4 to 12, p. 173.

**TABLE 2.—PER CENT OF CHANGE, APRIL TO MAY, 1930—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES**

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change April to May, 1930		Group	Per cent of change April to May, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	+0.6	+0.9	Stone, clay, and glass products..	+0.6	-0.3
Textiles and their products.....	-3.2	-6.0	Metal products, other than iron and steel.....	-2.0	-5.0
Iron and steel and their pro- ducts.....	-1.4	-3.6	Tobacco products.....	+1.4	+6.4
Lumber and its products.....	-1.2	-0.7	Vehicles for land transportation..	+0.2	-0.9
Leather and its products.....	-3.5	-7.4	Miscellaneous industries.....	-3.1	-2.5
Paper and printing.....	-0.1	-0.2			
Chemicals and allied products..	-8.6	-4.9	<b>All industries.....</b>	<b>-1.6</b>	<b>-2.4</b>



**Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, May, 1930, and May, 1929**

THE level of employment in manufacturing industries in May, 1930, was 11.6 per cent lower than in May, 1929.

Five industries (ice cream, sugar refining, newspaper printing, chewing tobacco, and shipbuilding) reported increased employment and earnings over the 12-month interval. Slaughtering, cast-iron pipe, and petroleum refining each showed a gain in pay-roll totals in May, 1930, over May, 1929.

Twenty-six industries showed decreases of from 10 to 28.6 per cent in employment from May, 1929, to May, 1930, the decrease over the year interval in a great number of cases being due to the unusually high level reached by these industries in May, 1929.

The outstanding decreases in employment over the year period were in pianos, automobiles, tires, carriages, millwork, brass, woolen and worsted goods, carpets, brick, agricultural implements, and machine tools. The cotton goods industry showed a drop of 13.4 per cent in number of employees and the iron and steel industry decreased 6.6 per cent.

Decreased employment and earnings were shown in each of the nine geographic divisions, the East North Central division showing the largest decreases, due chiefly to changed conditions in the automobile industry.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1930, WITH MAY, 1929

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change May, 1930 com- pared with May, 1929		Industry	Per cent of change May, 1930 com- pared with May, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
<b>Food and kindred products</b>	-2.7	-2.4	<b>Chemicals and allied prod- ucts</b>	-4.5	-4.8
Slaughtering and meat packing	-2.0	+0.3	Chemicals	-7.8	-10.8
Confectionery	-4.5	-7.4	Fertilizers	-5.8	-4.4
Ice cream	+4.1	+4.1	Petroleum refining	-0.2	+1.3
Flour	-1.9	-3.1			
Baking	-4.1	-4.1	<b>Stone, clay, and glass prod- ucts</b>	-12.0	-16.2
Sugar refining, cane	+3.2	+0.3	Cement	-2.7	-3.8
<b>Textiles and their products</b>	-12.3	-20.6	Brick, tile, and terra cotta	-19.0	-24.2
Cotton goods	-13.4	-20.3	Pottery	-10.3	-18.0
Hosiery and knit goods	-8.3	-19.7	Glass	-8.1	-12.1
Silk goods	-10.0	-20.4			
Woolen and worsted goods	-19.8	-23.2	<b>Metal products, other than iron and steel</b>	-18.6	-28.0
Carpets and rugs	-19.4	-34.7	Stamped and enameled ware	-12.1	-20.9
Dyeing and finishing tex- tiles	-8.1	-15.1	Brass, bronze, and copper products	-21.2	-30.4
Clothing, men's	-10.8	-25.7			
Shirts and collars	-12.0	-22.3	<b>Tobacco products</b>	-1.0	-4.5
Clothing, women's	-10.7	-17.1	Chewing and smoking to- bacco and snuff	+2.2	+1.4
Millinery and lace goods	-8.0	-12.1	Cigars and cigarettes	-1.4	-5.2
<b>Iron and steel and their products</b>	-10.7	-17.4			
Iron and steel	-6.6	-13.1	<b>Vehicles for land transpor- tation</b>	-19.1	-23.6
Cast-iron pipe	-4.6	+0.3	Automobiles	-26.7	-30.9
Structural ironwork	-5.0	-7.0	Carriages and wagons	-22.5	-18.1
Foundry and machine-shop products	-13.2	-20.2	Car building and repairing, electric-railroad	-5.2	-4.5
Hardware	-12.0	-24.6	Car building and repairing, steam-railroad	-9.4	-13.8
Machine tools	-17.7	-28.2			
Steam fittings and steam and hot-water heating apparatus	-13.4	-22.5	<b>Miscellaneous industries</b>	-12.8	-12.7
Stoves	-15.9	-24.9	Agricultural implements	-18.7	-26.6
<b>Lumber and its products</b>	-17.8	-20.9	Electrical machinery, ap- paratus, and supplies	-10.9	-9.9
Lumber, sawmills	-16.9	-17.8	Pianos and organs	-28.6	-33.2
Lumber, millwork	-21.9	-21.6	Rubber boots and shoes	-14.7	-20.4
Furniture	-17.6	-26.7	Automobile tires	-25.6	-24.8
<b>Leather and its products</b>	-3.9	-14.1	Shipbuilding	+8.7	+12.0
Leather	-2.7	-5.3			
Boots and shoes	-4.1	-16.7	<b>All industries</b>	-11.6	-16.4
<b>Paper and printing</b>	-0.3	-0.9			
Paper and pulp	-0.4	-2.0			
Paper boxes	-5.1	-9.4			
Printing, book and job	-0.1	-0.4			
Printing, newspapers	+1.5	+1.3			

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION <sup>1</sup>			GEOGRAPHIC DIVISION—CON.		
New England	-12.5	-18.4	West South Central	-9.3	-9.3
Middle Atlantic	-9.2	-13.3	Mountain	-9.1	-8.0
East North Central	-17.6	-23.3	Pacific	-13.5	-13.6
West North Central	-6.8	-8.1			
South Atlantic	-6.2	-8.6	<b>All divisions</b>	-11.6	-16.4
East South Central	-9.7	-12.2			

<sup>1</sup> See footnotes 4 to 12, p. 173.

## Per Capita Earnings in Manufacturing Industries

PER CAPITA EARNINGS in manufacturing industries in May, 1930, were 0.9 per cent lower than in April, 1930, and 5.4 per cent less than in May, 1929. The per cents of change in per capita earnings in May, 1930, as compared with April, 1930, and May, 1929, for each industry are shown in Table 4.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS IN MANUFACTURING INDUSTRIES, MAY, 1930, WITH APRIL, 1930, AND MAY, 1929

Industry	Per cent of change May, 1930, com- pared with—		Industry	Per cent of change May, 1930, com- pared with—	
	April, 1930	May, 1929		April, 1930	May, 1929
Fertilizers.....	+8.4	+1.4	Structural ironwork.....	-0.7	-2.4
Woolen and worsted goods.....	+7.9	-4.2	Paper boxes.....	-0.8	-4.3
Sugar refining, cane.....	+6.5	-2.8	Paper and pulp.....	-1.1	-1.7
Cigars and cigarettes.....	+5.5	-4.0	Flour.....	-1.6	-1.6
Shipbuilding.....	+2.7	+3.1	Stoves.....	-1.6	-10.3
Lumber, millwork.....	+2.3	-0.2	Confectionery.....	-1.7	-3.2
Pianos and organs.....	+1.7	-6.6	Machine tools.....	-1.7	-13.0
Printing, book and job.....	+1.1	( <sup>1</sup> )	Car building and repairing, steam-railroad.....	-2.0	-4.7
Electrical machinery, appara- tus, and supplies.....	+1.0	+1.3	Cotton goods.....	-2.1	-8.2
Leather.....	+0.9	-2.8	Iron and steel.....	-2.3	-6.9
Carriages and wagons.....	+0.5	+5.9	Foundry and machine-shop products.....	-2.4	-8.0
Ice cream.....	+0.5	-0.1	Brass, bronze, and copper prod- ucts.....	-2.6	-11.8
Slaughtering and meat packing.....	+0.5	+2.4	Dyeing and finishing textiles.....	-3.0	-7.7
Automobile tires.....	+0.4	+1.0	Steam fittings and steam and hot-water heating apparatus.....	-3.4	-10.6
Rubber boots and shoes.....	+0.4	-6.7	Silk goods.....	-3.8	-11.7
Cast-iron pipe.....	+0.3	+5.1	Stamped and enameled ware.....	-4.4	-9.8
Furniture.....	+0.3	-11.0	Clothing, men's.....	-4.8	-16.6
Petroleum refining.....	+0.3	-1.5	Pottery.....	-5.0	-8.7
Chewing and smoking tobacco and snuff.....	+0.2	-0.6	Carpets and rugs.....	-5.2	-19.0
Lumber, sawmills.....	+0.1	-1.1	Boots and shoes.....	-5.6	-13.2
Glass.....	+ ( <sup>2</sup> )	-4.3	Shirts and collars.....	-5.7	-11.5
Baking.....	- ( <sup>2</sup> )	+0.3	Hosiery and knit goods.....	-5.8	-12.6
Cement.....	-0.1	-1.2	Millinery and lace goods.....	-6.1	-4.4
Chemicals.....	-0.1	-3.1	Agricultural implements.....	-6.2	-10.0
Brick, tile, and terra cotta.....	-0.3	-6.3	Clothing, women's.....	-6.7	-7.1
Car building and repairing, elec- tric-railroad.....	-0.4	+1.0			
Printing, newspaper.....	-0.4	+0.2			
Automobiles.....	-0.7	-5.9			
Hardware.....	-0.7	-14.4			
			All industries.....	-0.9	-5.4

<sup>1</sup> No change.

<sup>2</sup> Less than one-tenth of 1 per cent.

## Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to May, 1930, together with average indexes for each of the years 1923 to 1929, inclusive.

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for May, 1929, and for March, April, and May, 1930.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the importance of the industries.



TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO MAY, 1930

[Monthly average, 1926=100]

Month	Employment								Pay-roll total							
	1923	1924	1925	1926	1927	1928	1929	1930	1923	1924	1925	1926	1927	1928	1929	1930
January	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5	87.6
February	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7
March	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	104.7	103.3	100.8	103.4	102.0	95.2	103.9	90.8
April	110.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8
May	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6
June	110.9	95.6	98.0	99.3	97.0	93.1	98.8	-----	109.3	90.8	95.7	99.7	97.4	94.2	102.8	-----
July	109.2	92.3	97.2	97.7	95.0	92.2	98.2	-----	104.3	84.3	93.5	95.2	93.0	91.2	98.2	-----
August	108.5	92.5	97.8	98.7	95.1	93.6	98.6	-----	103.7	87.2	95.4	98.7	95.0	94.2	102.1	-----
September	108.6	94.3	98.9	100.3	95.8	95.0	99.3	-----	104.4	89.8	94.4	99.3	94.1	95.4	102.6	-----
October	108.1	95.6	100.4	100.7	95.3	95.9	98.3	-----	106.8	92.4	100.4	102.9	95.2	99.0	102.3	-----
November	107.4	95.5	100.7	99.5	93.5	95.4	94.8	-----	105.4	91.4	100.4	99.6	91.6	96.1	95.1	-----
December	105.4	97.3	100.8	98.9	92.6	95.5	91.9	-----	103.2	95.7	101.6	99.8	93.2	97.7	92.0	-----
Average	108.8	98.2	99.2	100.0	96.4	93.8	97.5	89.4	104.3	94.6	97.7	100.0	96.5	94.5	100.4	89.3

1 Average for 5 months.

Following Table 6 is a series of graphs, made from index numbers, showing clearly the course of employment for January, February, March, April, and May, 1930, and for each month of 1929. The first chart represents the 54 separate industries combined and shows the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1929, inclusive, and for January, February, March, April, and May, 1930, and following this presentation are charts showing the trend of employment alone through each month of 1929 and January, February, March, April, and May, 1930, in each separate industry.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1929, AND MARCH, APRIL, AND MAY, 1930

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1929	1930			1929	1930		
	May	March	April	May	May	March	April	May
<b>General index</b>	99.2	89.8	89.1	87.7	104.8	90.8	89.8	87.6
<b>Food and kindred products</b>	96.9	94.8	93.7	94.3	100.4	97.2	97.1	98.0
Slaughtering and meat packing	97.8	97.8	95.2	95.8	99.6	99.0	98.8	99.9
Confectionery	84.2	86.2	83.3	80.4	87.3	88.0	85.1	80.8
Ice cream	93.8	80.5	86.2	97.6	95.4	78.8	87.2	99.3
Flour	96.8	100.0	95.9	95.0	101.3	104.9	100.7	98.2
Baking	102.0	97.0	97.3	97.8	104.7	99.2	100.0	100.4
Sugar refining, cane	94.4	93.8	94.8	97.4	102.5	100.4	94.0	102.8
<b>Textiles and their products</b>	97.9	90.8	88.7	85.9	98.5	88.8	83.2	78.2
Cotton goods	96.9	87.7	86.9	83.9	97.5	82.7	82.2	77.7
Hosiery and knit goods	98.0	91.2	91.0	89.9	105.4	94.2	90.8	84.6
Silk goods	99.2	97.1	95.3	89.3	105.1	98.1	92.8	83.7
Woolen and worsted goods	97.4	78.8	73.7	78.1	99.7	72.9	67.1	76.6
Carpets and rugs	107.6	96.6	95.0	86.7	102.8	81.8	77.6	67.1
Dyeing and finishing textiles	103.1	99.8	98.0	94.8	106.5	100.6	96.3	90.4
Clothing, men's	88.1	86.8	81.9	78.6	82.6	79.0	67.2	61.4
Shirts and collars	92.6	89.3	86.9	81.5	87.4	81.3	76.8	67.9
Clothing, women's	110.7	106.3	103.8	98.9	104.6	109.9	97.5	86.7
Millinery and lace goods	97.3	99.9	97.7	89.5	95.6	101.9	97.6	84.0

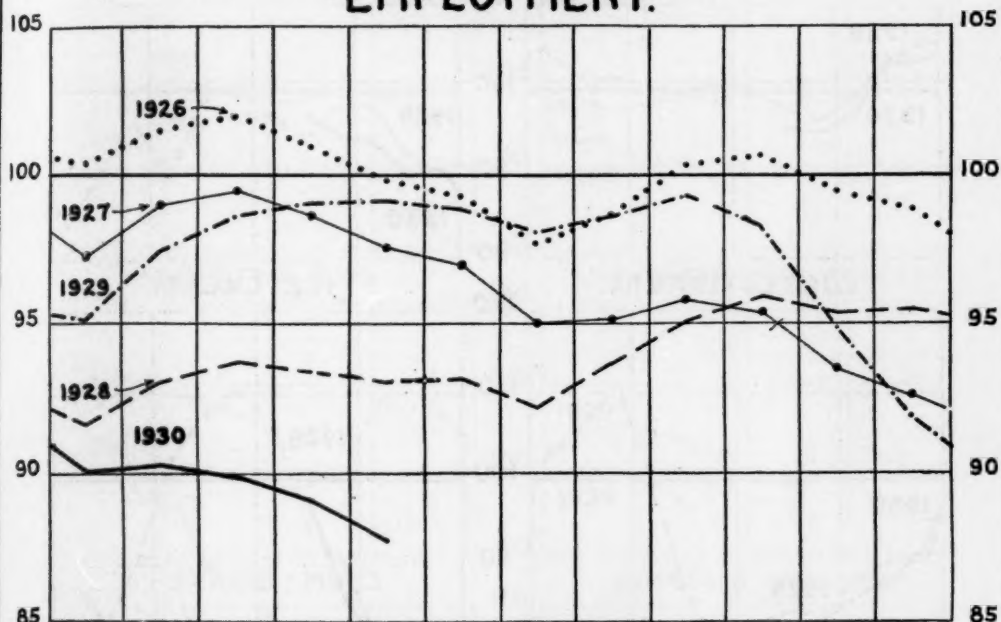
TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1929, AND MARCH, APRIL, AND MAY, 1930—Continued

Industry	Employment				Pay roll totals			
	1929	1930			1929	1930		
	May	March	April	May	May	March	April	May
<b>Iron and steel and their products</b>	<b>101.5</b>	<b>92.1</b>	<b>91.9</b>	<b>90.6</b>	<b>108.4</b>	<b>92.8</b>	<b>92.8</b>	<b>89.5</b>
Iron and steel	97.1	90.3	90.8	90.7	105.9	93.1	94.3	92.0
Cast-iron pipe	76.0	70.3	72.1	72.5	75.0	71.2	74.5	75.2
Structural ironwork	100.4	93.7	94.7	95.4	103.6	92.5	96.3	96.3
Foundry and machine-shop products	108.3	97.0	96.4	94.0	115.4	97.5	96.8	92.1
Hardware	93.4	85.2	83.4	82.2	97.1	79.1	74.8	73.2
Machine tools	130.3	114.3	110.4	107.2	143.1	113.9	107.6	102.8
Steam fittings and steam and hot-water heating apparatus	78.2	70.1	68.8	67.7	79.6	66.0	65.0	61.7
Stoves	92.9	80.0	79.4	78.1	91.1	73.4	70.7	68.4
<b>Lumber and its products</b>	<b>89.0</b>	<b>74.8</b>	<b>74.1</b>	<b>73.2</b>	<b>91.3</b>	<b>73.4</b>	<b>72.7</b>	<b>72.2</b>
Lumber, sawmills	88.4	73.7	73.7	73.5	91.5	74.7	75.4	75.2
Lumber, millwork	87.4	68.2	68.0	68.3	88.3	66.7	67.3	69.2
Furniture	91.7	81.7	78.7	75.6	93.0	75.3	70.8	68.2
<b>Leather and its products</b>	<b>89.3</b>	<b>90.5</b>	<b>88.9</b>	<b>85.8</b>	<b>85.1</b>	<b>82.2</b>	<b>78.9</b>	<b>73.1</b>
Leather	89.2	89.1	88.3	85.8	89.3	87.3	86.2	85.5
Boots and shoes	89.3	90.9	89.1	85.6	83.6	80.8	76.8	69.6
<b>Paper and printing</b>	<b>92.9</b>	<b>100.8</b>	<b>99.7</b>	<b>99.6</b>	<b>105.8</b>	<b>106.5</b>	<b>105.1</b>	<b>104.9</b>
Paper and pulp	95.0	95.6	94.9	94.6	98.1	98.5	97.5	96.1
Paper boxes	92.5	90.6	89.3	87.8	100.3	96.3	93.2	90.9
Printing, book and job	100.9	102.6	100.5	100.8	106.0	107.2	104.2	105.6
Printing, newspapers	107.5	109.2	109.0	109.1	112.8	114.3	114.6	114.3
<b>Chemicals and allied products</b>	<b>97.4</b>	<b>102.2</b>	<b>101.7</b>	<b>93.0</b>	<b>101.9</b>	<b>102.1</b>	<b>102.0</b>	<b>97.0</b>
Chemicals	102.0	95.6	94.4	94.0	107.6	99.0	96.5	96.0
Fertilizers	90.1	139.0	145.7	84.9	92.7	122.5	139.9	88.6
Petroleum refining	94.7	98.2	96.1	94.5	98.0	101.5	100.7	99.3
<b>Stone, clay, and glass products</b>	<b>89.9</b>	<b>75.9</b>	<b>78.6</b>	<b>79.1</b>	<b>90.1</b>	<b>72.2</b>	<b>75.7</b>	<b>75.5</b>
Cement	83.7	71.5	77.3	81.4	85.1	69.9	77.7	81.9
Brick, tile, and terra cotta	85.8	61.5	67.0	69.5	84.3	55.5	61.8	63.9
Pottery	96.3	91.0	90.6	86.4	93.4	85.4	84.6	76.6
Glass	96.0	91.9	90.3	88.2	99.9	90.7	89.8	87.8
<b>Metal products, other than iron and steel</b>	<b>100.8</b>	<b>85.1</b>	<b>83.8</b>	<b>82.1</b>	<b>100.1</b>	<b>84.5</b>	<b>82.6</b>	<b>78.5</b>
Stamped and enameled ware	92.7	85.2	83.6	81.5	96.3	83.7	81.7	76.2
Brass, bronze, and copper products	104.6	85.1	83.9	82.4	114.1	84.8	82.9	79.4
<b>Tobacco products</b>	<b>92.3</b>	<b>91.8</b>	<b>90.1</b>	<b>91.4</b>	<b>91.0</b>	<b>85.8</b>	<b>81.7</b>	<b>86.9</b>
Chewing and smoking tobacco and snuff	85.5	93.7	88.8	87.4	84.8	93.7	87.2	86.0
Cigars and cigarettes	93.2	91.5	90.3	91.9	91.8	84.8	81.0	87.0
<b>Vehicles for land transportation</b>	<b>107.5</b>	<b>86.0</b>	<b>86.8</b>	<b>87.0</b>	<b>118.7</b>	<b>89.9</b>	<b>91.5</b>	<b>90.7</b>
Automobiles	133.0	93.1	96.1	97.5	143.1	94.6	98.1	98.9
Carriages and wagons	81.3	65.3	64.5	63.0	85.6	73.8	71.6	70.1
Car building and repairing, electric-railroad	93.4	89.2	89.4	88.5	95.6	92.4	92.6	91.3
Car building and repairing, steam-railroad	85.8	79.5	78.5	77.7	95.5	85.1	84.8	82.3
<b>Miscellaneous industries</b>	<b>113.1</b>	<b>102.9</b>	<b>101.8</b>	<b>98.6</b>	<b>117.7</b>	<b>105.5</b>	<b>105.4</b>	<b>102.8</b>
Agricultural implements	131.6	122.0	114.7	107.0	140.1	128.6	117.5	102.8
Electrical machinery, apparatus, and supplies	118.0	111.3	109.2	105.1	123.1	115.2	114.2	110.9
Pianos and organs	66.5	50.0	49.2	47.5	63.0	45.1	42.9	42.1
Rubber boots and shoes	91.6	89.5	86.0	78.1	95.4	87.8	83.3	75.9
Automobile tires	114.7	80.3	83.1	85.3	119.4	80.7	87.0	89.8
Shipbuilding	108.6	119.6	121.7	118.0	112.0	124.8	125.9	125.4

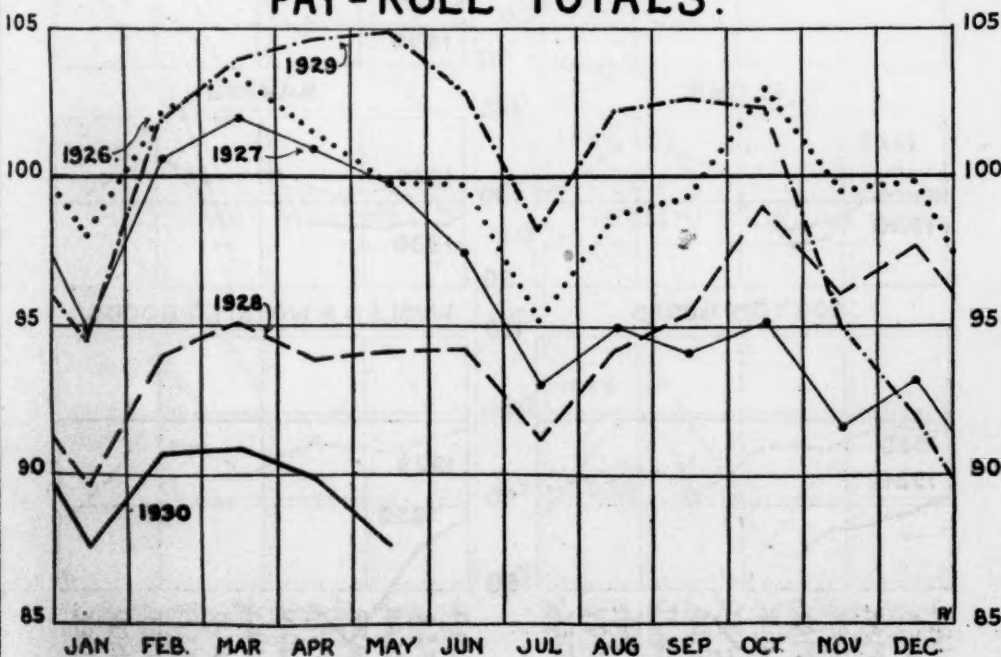
# MANUFACTURING INDUSTRIES. MONTHLY INDEXES, 1926-1930.

MONTHLY AVERAGE 1926 = 100.

## EMPLOYMENT.



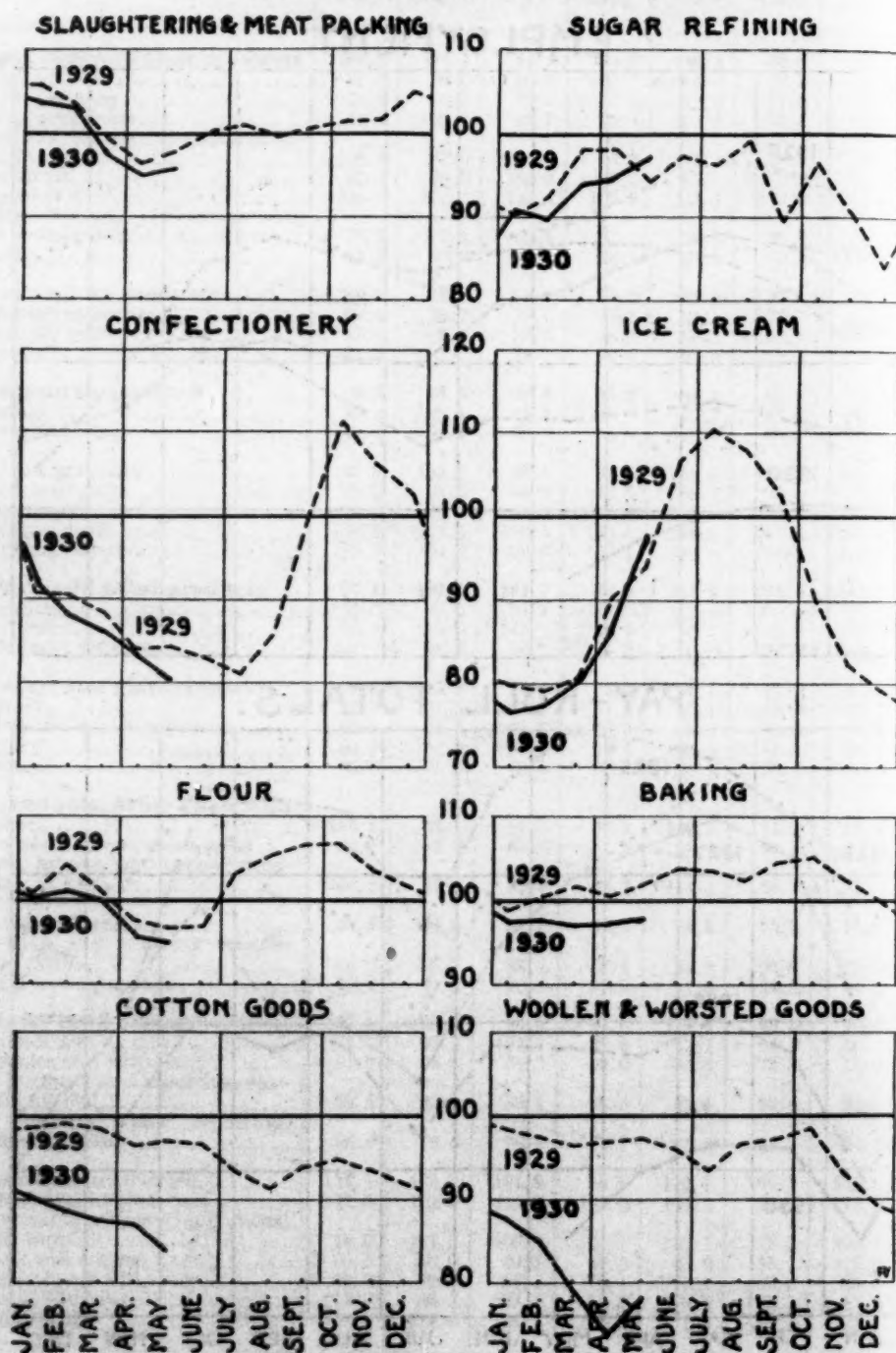
## PAY-ROLL TOTALS.





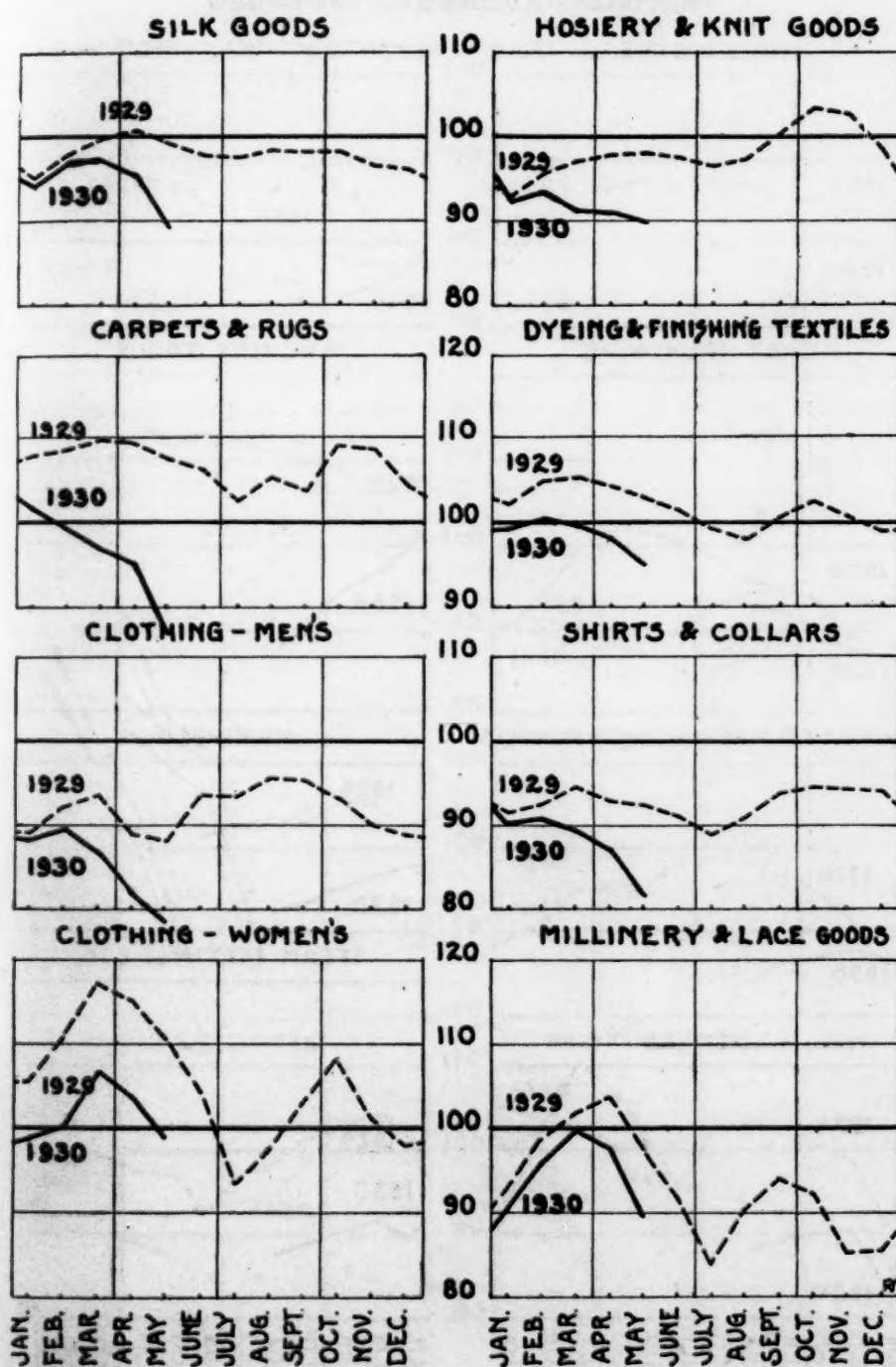
## TREND OF EMPLOYMENT.

MONTHLY AVERAGE, 1926 = 100.



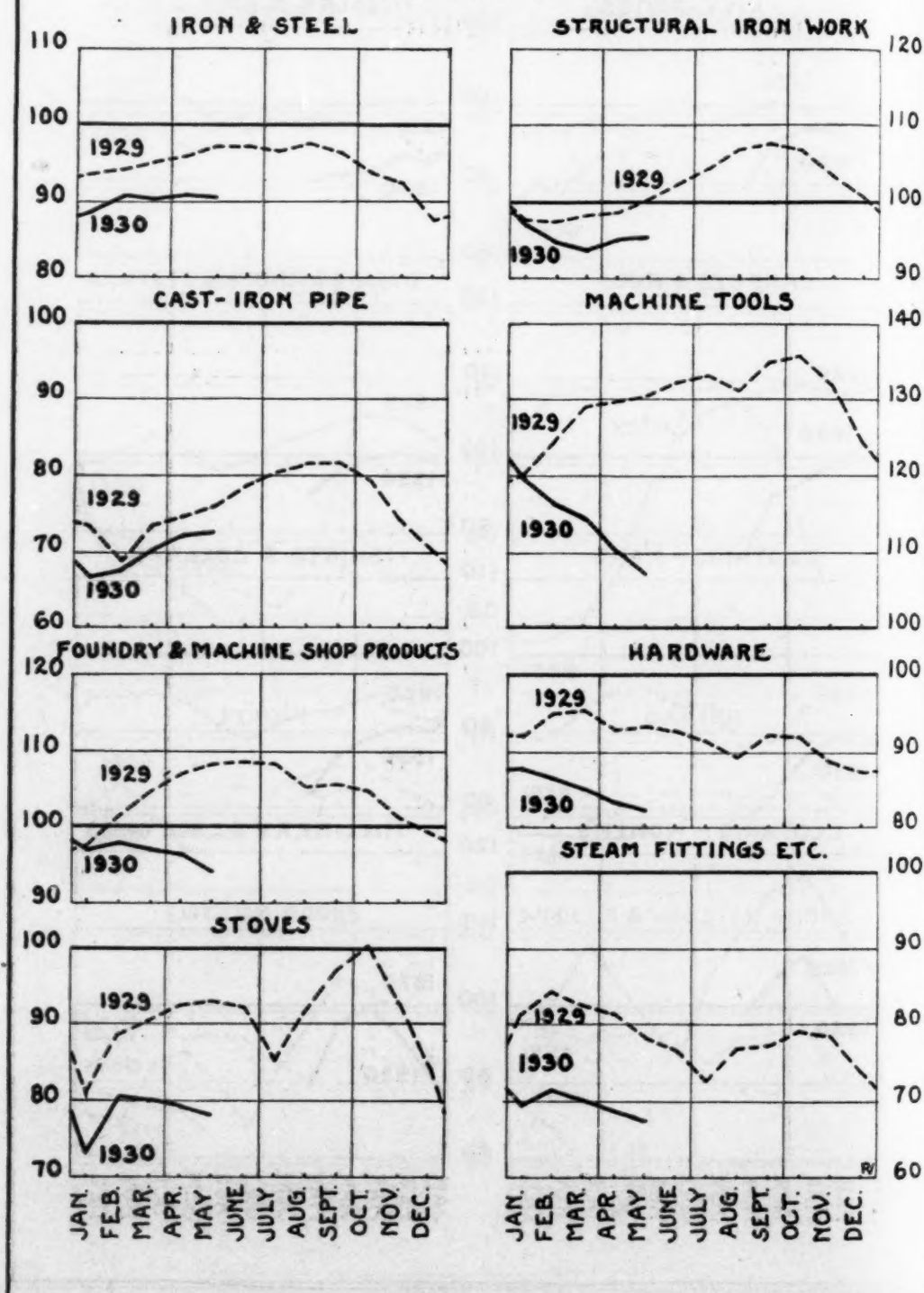
## TREND OF EMPLOYMENT.

MONTHLY AVERAGE 1926=100.



## TREND OF EMPLOYMENT.

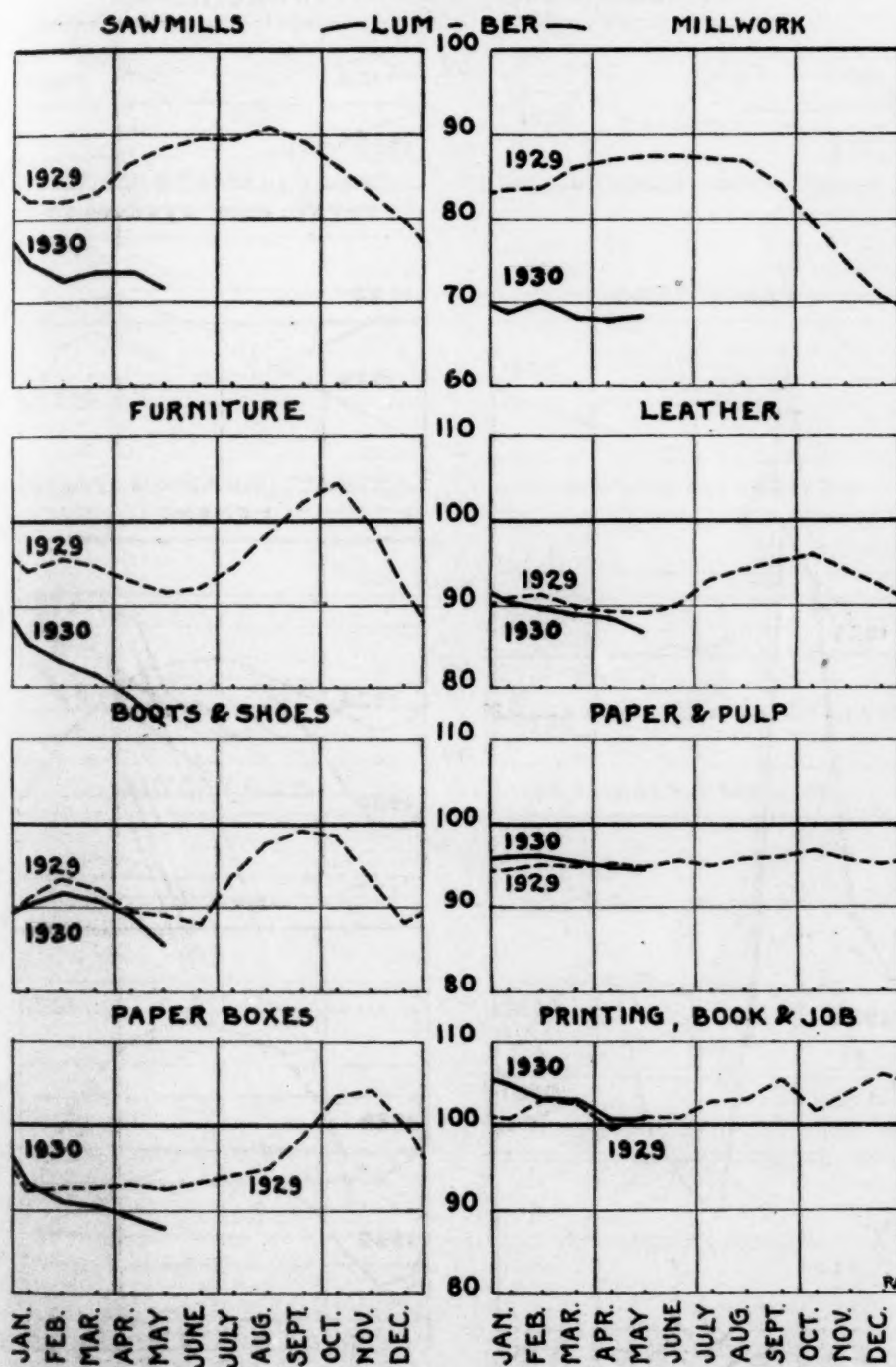
MONTHLY AVERAGE 1926 = 100.





## TREND OF EMPLOYMENT.

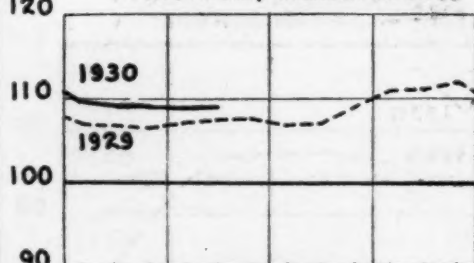
MONTHLY AVERAGE 1926 = 100.



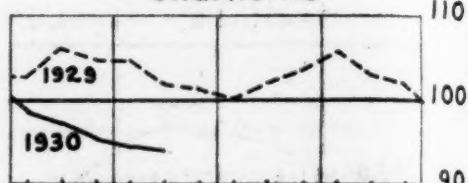
## TREND OF EMPLOYMENT.

MONTHLY AVERAGE 1926 = 100.

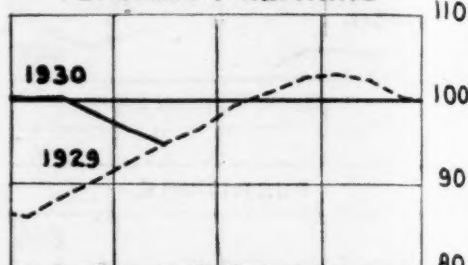
PRINTING, NEWSPAPERS



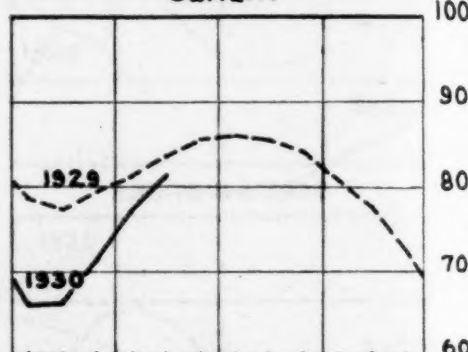
CHEMICALS



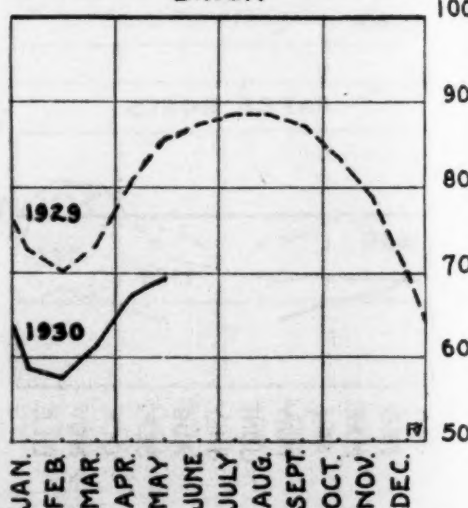
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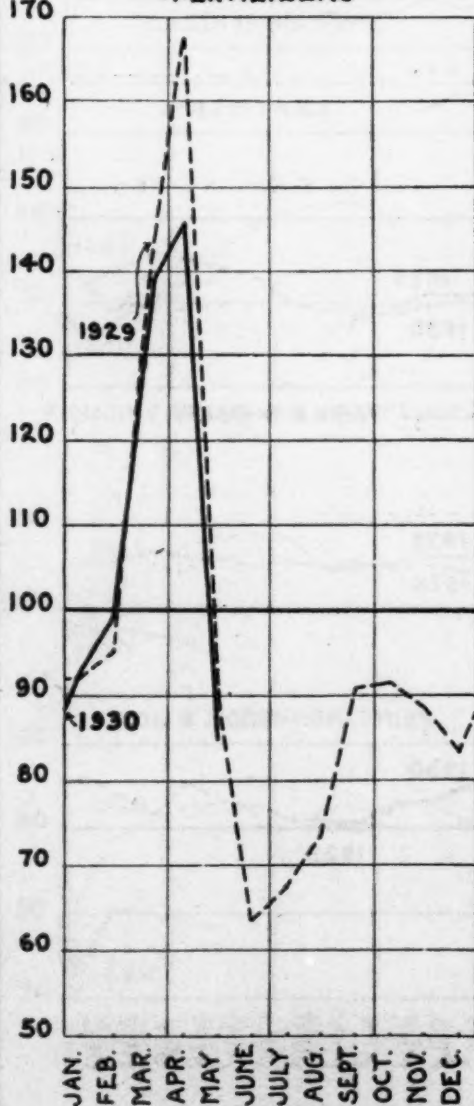
CEMENT

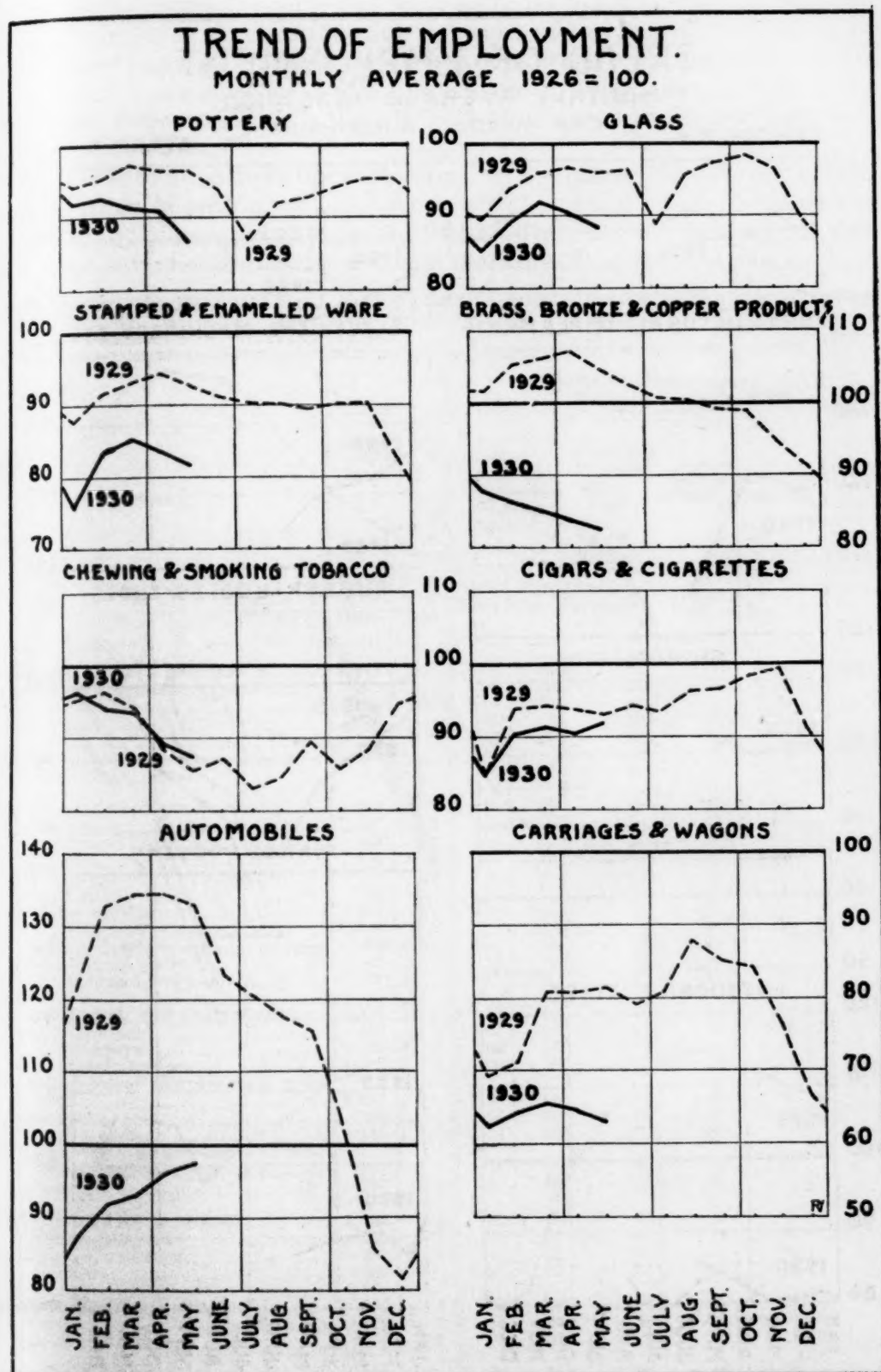


BRICK

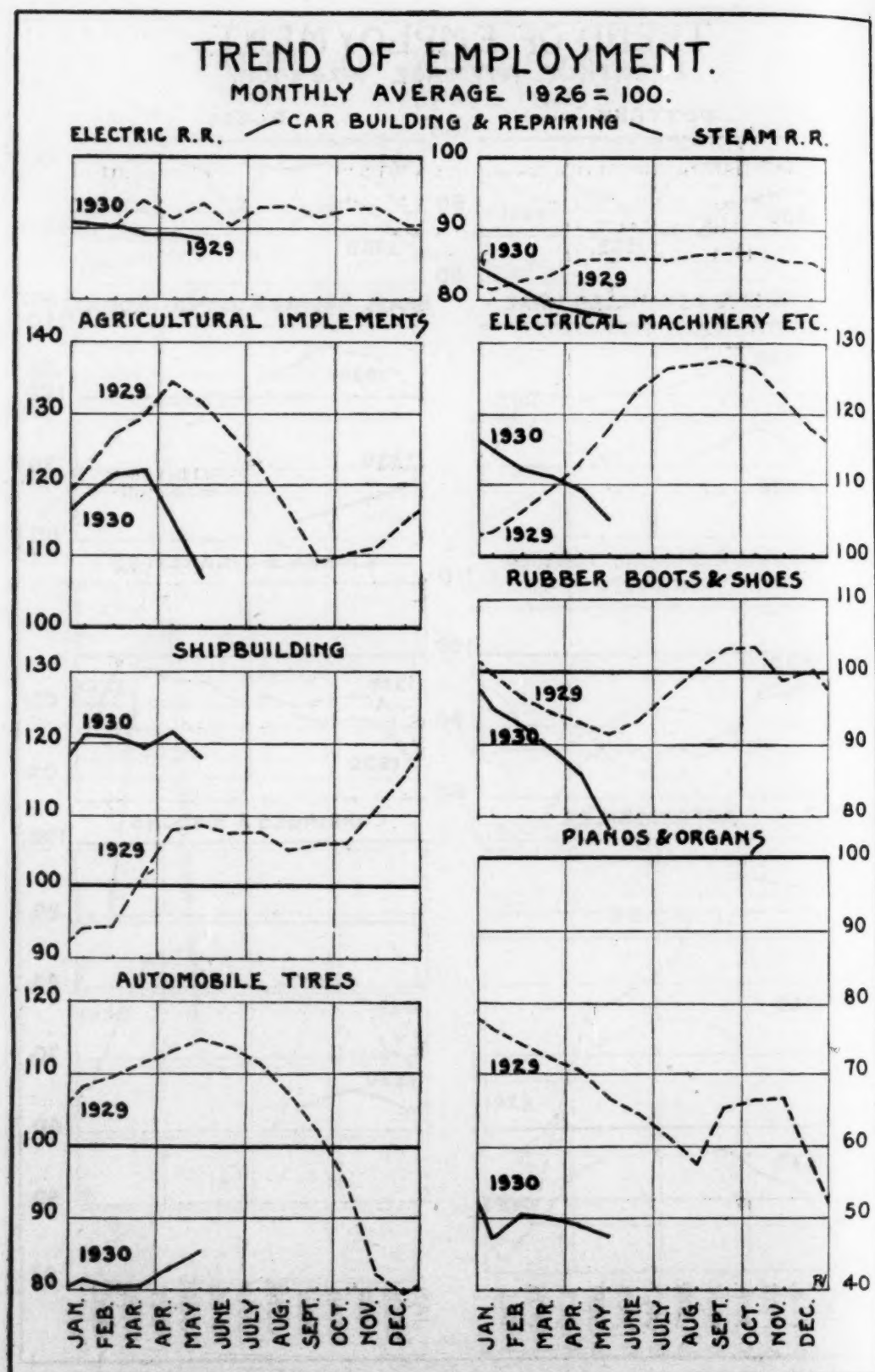


FERTILIZERS









**Force Employed and Time Worked in Manufacturing Industries in May, 1930**

TEN THOUSAND NINE HUNDRED AND TEN establishments in 54 manufacturing industries reported in May as to force employed and working time of employees. Twenty-nine per cent of the establishments had a full normal force of employees, 70 per cent were working with reduced forces, and 1 per cent were idle; employees in 68 per cent of the establishments were working full time and employees in 31 per cent were working part time.

The establishments in operation had an average of 85 per cent of a full normal force of employees who were working an average of 94 per cent of full time; these percentages indicate a decrease of 2 per cent in average force with no change in average working time from April to May.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN MAY, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
			Full time	Part time		Full normal force	Part normal force	
<b>Food and kindred products</b>	<b>1,661</b>	(1)	<b>84</b>	<b>16</b>	<b>97</b>	<b>37</b>	<b>63</b>	<b>87</b>
Slaughtering and meat packing	177		84	16	99	38	62	89
Confectionery	256	(1)	54	46	90	6	94	67
Ice cream	230		88	12	98	27	73	83
Flour	310	1	82	17	97	37	62	87
Baking	677		95	5	99	52	48	96
Sugar refining, cane	11		91	9	99	45	55	98
<b>Textiles and their products</b>	<b>1,783</b>	<b>2</b>	<b>60</b>	<b>38</b>	<b>91</b>	<b>27</b>	<b>71</b>	<b>82</b>
Cotton goods	447	2	48	50	88	21	77	81
Hosiery and knit goods	293	2	61	37	90	22	76	84
Silk goods	242	2	74	24	95	35	64	87
Woolen and worsted goods	175	2	59	39	89	10	89	73
Carpets and rugs	24		38	63	82	17	83	78
Dyeing and finishing	101	1	48	51	89	24	75	83
Clothing, men's	211	4	64	32	93	39	57	82
Shirts and collars	80	1	58	41	92	44	55	88
Clothing, women's	145	1	79	19	98	40	59	93
Millinery and lace goods	65		71	29	95	28	72	83
<b>Iron and steel, and their products</b>	<b>1,797</b>	<b>1</b>	<b>53</b>	<b>46</b>	<b>90</b>	<b>24</b>	<b>76</b>	<b>88</b>
Iron and steel	168	3	61	36	91	18	79	92
Cast-iron pipe	38	3	39	58	77	8	89	73
Structural ironwork	163		69	31	95	28	72	91
Foundry and machine-shop products	1,016	(1)	55	44	91	22	78	85
Hardware	56		25	75	84	13	88	78
Machine tools	147		44	56	90	42	58	99
Steam fittings and steam and hot-water heating apparatus	102	1	38	61	86	32	67	81
Stoves	107	2	43	55	86	21	77	87
<b>Lumber and its products</b>	<b>1,165</b>	<b>1</b>	<b>57</b>	<b>41</b>	<b>91</b>	<b>19</b>	<b>79</b>	<b>76</b>
Lumber, sawmills	538	2	74	24	95	22	75	77
Lumber, millwork	281	1	51	48	91	15	84	76
Furniture	346	(1)	38	62	85	18	82	74
<b>Leather, and its products</b>	<b>396</b>	<b>1</b>	<b>69</b>	<b>30</b>	<b>93</b>	<b>31</b>	<b>68</b>	<b>88</b>
Leather	122	1	83	16	98	30	70	83
Boots and shoes	274	1	62	36	91	32	67	90
<b>Paper and printing</b>	<b>1,015</b>	<b>(1)</b>	<b>86</b>	<b>14</b>	<b>98</b>	<b>48</b>	<b>52</b>	<b>97</b>
Paper and pulp	160	3	76	21	96	34	63	95
Paper boxes	159		58	42	94	27	73	87
Printing, book and job	346		92	8	99	47	53	98
Printing, newspapers	350		96	4	100	64	36	102

<sup>1</sup> Less than one-half of 1 per cent.

TABLE 7.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN MAY, 1930, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

Industry	Establishments reporting		Operating establishments only						Average per cent of full normal force employed in establishments operating
			Per cent of establishments in which employees worked		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—			
			Full time	Part time		Full normal force	Part normal force		
<b>Chemicals and allied products</b> .....	<b>291</b>	<b>3</b>	<b>85</b>	<b>12</b>	<b>99</b>	<b>21</b>	<b>76</b>		
Chemicals.....	117	3	88	9	100	30	67	81	
Fertilizers.....	135	3	79	19	99	13	84	91	
Petroleum refining.....	39		100		100	23	77	50	
<b>Stone, clay, and glass products</b> .....	<b>855</b>	<b>5</b>	<b>76</b>	<b>19</b>	<b>96</b>	<b>23</b>	<b>71</b>	<b>86</b>	
Cement.....	85	1	98	1	100	18	81	83	
Brick, tile and terra cotta.....	557	7	74	19	95	20	73	80	
Pottery.....	102	1	62	37	92	38	61	72	
Glass.....	111	4	82	14	97	32	65	93	
<b>Metal products, other than iron and steel</b> .....	<b>208</b>	<b>1</b>	<b>59</b>	<b>40</b>	<b>93</b>	<b>26</b>	<b>73</b>	<b>94</b>	
Stamped and enamel ware.....	66	2	62	36	93	26	73	80	
Brass, bronze, and copper products.....	142	1	57	42	92	26	73	88	
<b>Tobacco products</b> .....	<b>204</b>	<b>1</b>	<b>57</b>	<b>42</b>	<b>91</b>	<b>37</b>	<b>62</b>	<b>76</b>	
Chewing and smoking tobacco and snuff.....	24		63	38	96	42	58	95	
Cigars and cigarettes.....	180	1	56	43	90	36	63	96	
<b>Vehicles for land transportation</b> .....	<b>1,117</b>	<b>(1)</b>	<b>68</b>	<b>32</b>	<b>96</b>	<b>22</b>	<b>78</b>	<b>96</b>	
Automobiles.....	191		67	33	95	33	67	85	
Carriages and wagons.....	48	4	58	38	94	10	85	86	
Car building and repairing, electric-railroad.....	349		91	9	99	36	64	69	
Car building and repairing, steam-railroad.....	529		54	46	93	10	90	94	
<b>Miscellaneous industries</b> .....	<b>418</b>	<b>(1)</b>	<b>63</b>	<b>37</b>	<b>94</b>	<b>31</b>	<b>69</b>	<b>81</b>	
Agricultural implements.....	81		52	48	91	35	65	92	
Electrical machinery, apparatus, and supplies.....	168		64	36	94	30	70	87	
Pianos and organs.....	57		42	58	87	7	93	65	
Rubber boots and shoes.....	8	13	63	25	97	25	63	61	
Automobile tires.....	35		63	37	95	29	71	83	
Shipbuilding.....	69		90	10	99	49	51	96	
<b>All industries</b> .....	<b>10,910</b>	<b>1</b>	<b>68</b>	<b>31</b>	<b>94</b>	<b>29</b>	<b>70</b>	<b>83</b>	

<sup>1</sup> Less than one-half of 1 per cent.

## 2. Employment in Coal Mining in May, 1930

**E**MPLOYMENT in coal mining—anthracite and bituminous coal combined—showed an increase of 0.2 per cent in May as compared with April, and pay-roll totals increased 7.2 per cent.

The 1,529 mines reported had in May 307,529 employees whose earnings in one week were \$7,736,465.

### Anthracite

IN ANTHRACITE mining in May there was an increase of 11.5 per cent in employment as compared with April, and an increase of 31.7 per cent in pay-roll totals.

Employment in May, 1930, was 9.5 per cent lower than in May, 1929, and pay-roll totals were 0.2 per cent smaller.\*

\* For indexes of employment and pay-roll totals, see p. 200.



All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division. The details for April and May are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN APRIL AND MAY, 1930

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
Middle Atlantic <sup>1</sup>	153	86,817	96,761	+11.5	\$2,412,039	\$3,175,815	+31.7

<sup>1</sup> See footnote 5, p. 173.

### Bituminous Coal

EMPLOYMENT in bituminous coal mining decreased 4.2 per cent in May as compared with April, and pay-roll totals decreased 5.1 per cent, as shown by reports from 1,376 mines, in which there were, in May, 210,768 employees whose combined earnings in one week were \$4,560,650.

Employment in May, 1930, was 6.4 per cent lower than in May, 1929, and pay-roll totals were 15.7 per cent smaller.<sup>1</sup>

Details for each geographic division, except the New England division, for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
Middle Atlantic.....	406	64,864	62,719	-3.3	\$1,503,592	\$1,418,420	-5.7
East North Central.....	183	30,753	27,707	-9.9	639,745	585,610	-8.5
West North Central.....	57	4,953	4,631	-6.5	102,674	79,588	-22.5
South Atlantic.....	337	56,371	56,341	-0.1	1,237,800	1,216,933	-1.7
East South Central.....	238	44,859	43,561	-2.9	879,165	863,573	-1.8
West South Central.....	30	1,998	2,021	+1.2	42,740	36,455	-14.7
Mountain.....	115	14,614	12,303	-15.8	356,418	318,372	-10.7
Pacific.....	10	1,538	1,485	-3.4	43,685	41,699	-4.5
<b>All divisions.....</b>	<b>1,376</b>	<b>219,950</b>	<b>210,768</b>	<b>-4.2</b>	<b>4,805,812</b>	<b>4,560,650</b>	<b>-5.1</b>

<sup>1</sup> See footnotes 5 to 12, p. 173.

### 3. Employment in Metalliferous Mining in May, 1930

METALLIFEROUS mines in May showed a decrease in employment of 2.0 per cent as compared with April, and pay-roll totals decreased 3.1 per cent. The 351 mines covered had in May 54,608 employees, whose combined earnings in one week were \$1,603,032.

Employment in May, 1930, was 13.2 per cent lower than in May, 1929, and pay-roll totals were 18.2 per cent lower.<sup>a</sup>

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.

## COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL METAL-LIFEROUS MINES IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
Middle Atlantic.....	6	1,052	1,073	+2.0	\$31,224	\$31,364	+0.4
East North Central.....	41	11,164	11,036	-1.1	292,207	286,425	-2.0
West North Central.....	54	6,888	7,438	+8.0	220,088	235,630	+7.1
East South Central.....	14	3,486	3,499	+0.4	76,202	77,295	+1.4
West South Central.....	70	3,280	3,411	+4.0	82,220	85,327	+3.8
Mountain.....	134	26,841	25,180	-6.2	856,853	796,989	-7.0
Pacific.....	32	2,985	2,971	-0.5	95,826	90,002	-6.1
<b>All divisions.....</b>	<b>351</b>	<b>55,696</b>	<b>54,608</b>	<b>-2.0</b>	<b>1,654,620</b>	<b>1,603,632</b>	<b>-3.1</b>

<sup>1</sup> See footnotes 5 to 12, p. 173.

## 4. Employment in Quarrying and Nonmetallic Mining in May, 1930

**E**MPLOYMENT and pay-roll totals in this industrial group as a whole increased 3.9 per cent and 5.6 per cent, respectively, in May as compared with April. The 747 establishments covered reported 39,105 employees in May, whose combined earnings in one week were \$1,028,502.

Employment in May, 1930, was 12.8 per cent lower than in May, 1929, and pay-roll totals were 15.8 per cent smaller.\*

Details for each geographic division are shown in the following table:

## COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL QUARRIES AND NONMETALLIC MINES IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	103	4,672	4,943	+5.8	\$140,289	\$147,181	+4.9
Middle Atlantic.....	116	6,816	7,311	+7.3	185,572	206,584	+11.3
East North Central.....	223	10,230	10,523	+2.9	302,623	324,383	+7.2
West North Central.....	75	2,694	2,713	+0.7	68,772	70,283	+2.2
South Atlantic.....	95	5,873	6,230	+6.1	117,703	120,238	+2.2
East South Central.....	59	2,944	3,067	+4.2	46,897	50,995	+8.7
West South Central.....	38	3,005	2,960	-1.5	73,570	71,332	-3.0
Mountain.....	7	120	125	+4.2	3,488	3,336	-4.4
Pacific.....	31	1,273	1,233	-3.1	35,414	34,170	-3.5
<b>All divisions.....</b>	<b>747</b>	<b>37,627</b>	<b>39,105</b>	<b>+3.9</b>	<b>974,328</b>	<b>1,028,502</b>	<b>+5.6</b>

<sup>1</sup> See footnotes 4 to 12, p. 173.

## 5. Employment in Crude Petroleum Production in May, 1930

**A**N INCREASE of 3.4 per cent in employment in May over April and a decrease of 1.4 per cent in pay-roll totals were shown by reports received from 176 crude petroleum producing companies. These companies had in May 22,278 employees whose combined earnings in one week were \$786,147.

As data for this industry were not collected for the months prior to January, 1930, no comparison over the year interval is available at this time.

\* For indexes of employment and pay-roll totals, see p. 200.

Details for each geographic division except New England are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **CRUDE PETROLEUM PRODUCTION** COMPANIES IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
Middle Atlantic.....	17	815	803	-1.5	\$22,708	\$22,356	-1.6
East North Central.....	3	47	40	-14.9	1,501	1,552	+3.4
West North Central.....	5	120	113	-5.8	3,665	3,724	+1.6
South Atlantic.....	6	567	585	+3.2	16,978	17,104	+0.7
East South Central.....	2	257	260	+1.2	6,527	6,620	+1.4
West South Central.....	101	17,423	18,220	+4.6	649,679	642,401	-1.1
Mountain.....	12	254	250	-1.6	8,931	8,889	-0.5
Pacific.....	30	2,072	2,007	-3.1	87,155	83,501	-4.2
<b>All divisions.....</b>	<b>176</b>	<b>21,555</b>	<b>22,278</b>	<b>+3.4</b>	<b>797,144</b>	<b>786,147</b>	<b>-1.4</b>

<sup>1</sup> See footnotes 5 to 12, p. 173.

## 6. Employment in Public Utilities in May, 1930

**E**MPLOYMENT in 10,850 establishments—telephone and telegraph companies, power, light, and water companies, and electric railroads combined—increased 1.3 per cent in May as compared with April, and pay-roll totals increased 0.3 per cent. These establishments had in May 767,907 employees whose combined earnings in one week were \$23,075,077.

Employment in public utilities was 0.3 per cent lower in May, 1930, than in May, 1929, while pay-roll totals were 1.9 per cent greater.<sup>a</sup>

Data for the three groups into which public utilities have been separated follow.

### Telephone and Telegraph

**E**MPLOYMENT in telephone and telegraph companies was 0.8 per cent higher in May than in April, and pay-roll totals were 0.2 per cent lower. The 7,456 establishments reporting had in May 351,657 employees, whose combined earnings in one week were \$9,927,607.

Employment in May, 1930, was 0.7 per cent below the level of May, 1929, but pay-roll totals were 3.8 per cent higher in May, 1930, than in May, 1929.<sup>a</sup>

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **TELEPHONE AND TELEGRAPH** ESTABLISHMENTS IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	572	29,119	29,712	+2.0	\$866,595	\$881,187	+1.7
Middle Atlantic.....	1,216	111,682	113,390	+1.5	3,528,049	3,552,115	+0.7
East North Central.....	1,249	79,150	79,650	+0.6	2,186,169	2,185,004	-0.1
West North Central.....	1,252	32,130	32,616	+1.5	790,703	790,054	-0.1
South Atlantic.....	542	23,301	23,362	+0.3	614,481	610,995	-0.6
East South Central.....	589	11,933	11,919	-0.1	260,736	258,571	-0.8
West South Central.....	664	20,058	19,999	-0.3	455,627	443,497	-2.7
Mountain.....	478	8,016	8,174	+2.0	200,436	197,376	-1.5
Pacific.....	894	33,616	32,835	-2.3	1,046,492	1,008,808	-3.6
<b>All divisions.....</b>	<b>7,456</b>	<b>349,005</b>	<b>351,657</b>	<b>+0.8</b>	<b>9,949,288</b>	<b>9,927,607</b>	<b>-0.2</b>

<sup>1</sup> See footnotes 4 to 12, p. 173.

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.



**Power, Light, and Water**

EMPLOYMENT in power, light, and water plants was 2.7 per cent greater in May than in April and pay-roll totals were 1.9 per cent higher. The 2,916 establishments reporting had in May 259,507 employees whose combined earnings in one week were \$8,171,510.

Employment in May, 1930, was 5.1 per cent higher than in May, 1929, and pay-roll totals were 6.5 per cent greater.<sup>a</sup>

Details for each geographic division are shown in Table 2.

**TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL POWER, LIGHT, AND WATER COMPANIES IN APRIL AND MAY, 1930**

Geographic division <sup>1</sup>	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	234	21,251	21,752	+2.4	\$687,895	\$703,187	+2.2
Middle Atlantic.....	354	65,458	67,611	+3.3	2,134,771	2,180,991	+2.2
East North Central.....	485	57,006	58,015	+1.6	1,939,477	1,964,148	+1.3
West North Central.....	404	28,043	28,972	+3.3	823,263	842,632	+2.4
South Atlantic.....	259	23,815	24,067	+1.1	715,661	723,133	+1.0
East South Central.....	173	7,456	8,039	+7.8	189,960	193,635	+1.9
West South Central.....	563	18,541	18,818	+1.5	499,807	517,325	+3.5
Mountain.....	122	5,874	6,122	+4.2	179,431	189,817	+5.8
Pacific.....	322	26,110	26,111	+4.0	851,518	856,642	+0.6
<b>All divisions.....</b>	<b>2,916</b>	<b>252,644</b>	<b>259,507</b>	<b>+2.7</b>	<b>8,021,783</b>	<b>8,171,510</b>	<b>+1.9</b>

<sup>1</sup> See footnotes 4 to 12, p. 173.

**Electric Railroads**

EMPLOYMENT in the operation and maintenance of electric railroads, exclusive of car shops, remained practically unchanged from April to May, while pay-roll totals decreased 1.1 per cent. The 478 establishments reporting had in May 156,743 employees whose combined earnings in one week were \$4,975,960.

A comparison of employment and earnings in this group over the year period shows a drop of 5.2 and 5.0 per cent, respectively, in the two items.<sup>a</sup>

Details for each geographic division are shown in Table 3.

**TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN THE OPERATION AND MAINTENANCE OF IDENTICAL ELECTRIC RAILROADS IN APRIL AND MAY, 1930 <sup>1</sup>**

Geographic division <sup>1</sup>	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	49	14,259	14,656	+2.8	\$519,943	\$528,869	+1.7
Middle Atlantic.....	111	39,174	39,983	+2.1	1,227,913	1,250,238	+1.8
East North Central.....	105	49,502	48,598	-1.8	1,701,333	1,614,508	-5.1
West North Central.....	62	14,884	14,838	-0.3	454,960	456,540	+0.3
South Atlantic.....	52	8,926	8,842	-0.9	245,608	244,115	-0.6
East South Central.....	11	3,986	4,057	+1.8	108,697	110,373	+1.5
West South Central.....	37	6,110	5,987	-2.0	157,787	157,701	-0.1
Mountain.....	14	2,386	2,393	+0.3	64,305	65,520	+1.9
Pacific.....	37	17,479	17,389	-0.5	552,949	548,096	-0.9
<b>All divisions.....</b>	<b>478</b>	<b>156,706</b>	<b>156,743</b>	<b>+ (?)</b>	<b>5,032,495</b>	<b>4,975,960</b>	<b>-1.1</b>

<sup>1</sup> Not including car building and repairing, electric railroads, see vehicles group, manufacturing industries, p. 174, et seq.

<sup>2</sup> See footnotes 4 to 12, p. 173.

<sup>3</sup> Less than one-tenth of 1 per cent.

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.

## 7. Employment in Wholesale and Retail Trade in May, 1930

**E**MPLOYMENT in 9,172 establishments—wholesale and retail trade combined—showed a decrease of 0.5 per cent in May as compared with April, and a decrease of 0.3 per cent in pay-roll totals. These establishments had in May 313,310 employees, whose combined earnings in one week were \$7,991,779.

### Wholesale Trade

EMPLOYMENT and pay-roll totals in wholesale trade alone decreased 0.5 per cent in May as compared with April. The 2,154 establishments reporting had in May 67,410 employees and pay-roll totals of \$2,127,072.

Employment in May, 1930, was 2.2 per cent lower than in May, 1929, and pay-roll totals were 1.6 per cent lower.<sup>a</sup>

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL WHOLESALE TRADE ESTABLISHMENTS IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	175	3,910	3,971	+1.6	\$113,843	\$113,750	-0.1
Middle Atlantic.....	368	10,127	10,148	+0.2	326,398	326,186	-0.1
East North Central.....	292	13,775	13,733	-0.3	443,914	444,441	+0.1
West North Central.....	272	14,832	14,499	-2.2	444,789	439,647	-1.2
South Atlantic.....	294	4,359	4,300	-1.4	131,493	130,277	-0.9
East South Central.....	72	1,894	1,866	-1.5	55,397	54,552	-1.5
West South Central.....	265	6,150	6,050	-1.6	186,238	183,917	-1.2
Mountain.....	78	1,791	1,825	+1.9	62,032	62,524	+0.8
Pacific.....	338	10,893	11,018	+1.1	373,525	371,778	-0.5
<b>All divisions.....</b>	<b>2,154</b>	<b>67,731</b>	<b>67,410</b>	<b>-0.5</b>	<b>2,137,599</b>	<b>2,127,072</b>	<b>-0.5</b>

<sup>1</sup> See footnotes 4 to 12, p. 173.

### Retail Trade

EMPLOYMENT in retail trade decreased 0.6 per cent in May and pay-roll totals decreased 0.2 per cent. These decreases were owing in part to the release of some of the employees engaged for the Easter trade in April.

The 7,018 establishments from which reports were received had in May 245,900 employees whose earnings in one week were \$5,864,707.

Employment in May, 1930, was 0.6 per cent lower than in May, 1929, and pay-roll totals were 0.2 per cent greater.<sup>a</sup>

Details by geographic divisions are shown in Table 2.

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL RETAIL TRADE ESTABLISHMENTS IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	88	13, 112	13, 214	+0.8	\$316, 336	\$313, 433	-0.9
Middle Atlantic.....	311	49, 177	48, 865	-0.6	1, 253, 150	1, 260, 442	+0.6
East North Central.....	2, 399	74, 266	75, 438	+1.6	1, 865, 810	1, 902, 382	+2.0
West North Central.....	683	22, 298	21, 806	-2.2	474, 437	463, 233	-2.4
South Atlantic.....	982	21, 729	21, 062	-3.1	472, 948	459, 146	-2.9
East South Central.....	419	8, 567	8, 399	-2.0	164, 289	160, 865	-2.1
West South Central.....	231	11, 245	10, 831	-3.7	232, 200	223, 838	-3.6
Mountain.....	175	3, 588	3, 639	+1.4	78, 082	80, 313	+2.9
Pacific.....	1, 730	43, 298	42, 646	-1.5	1, 019, 179	1, 001, 055	-1.8
<b>All divisions.....</b>	<b>7, 018</b>	<b>247, 280</b>	<b>245, 900</b>	<b>-0.6</b>	<b>5, 876, 431</b>	<b>5, 864, 707</b>	<b>-0.2</b>

<sup>1</sup> See footnotes 4 to 12, p. 173.

### 8. Employment in Hotels in May, 1930

**E**MPLOYMENT in hotels decreased 2.1 per cent in May as compared with April, and pay-roll totals decreased 1.9 per cent. The 2,018 hotels for which reports were received had in May 161,235 employees whose earnings in one week were \$2,765,477.

Five of the nine geographic divisions showed decreased employment in May; the closing season of winter-resort hotels especially was reflected in decreased employment of 23.5 per cent in the South Atlantic geographic division, and small declines in the South Central divisions. The New England, Middle Atlantic, and North Central divisions reported increased pay-roll totals as well as increased employment.

Employment in May, 1930, was 0.1 per cent less than in May, 1929, and pay-roll totals were 0.5 per cent smaller.<sup>a</sup>

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following.

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.



COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS  
IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per- cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	118	8,439	8,716	+3.3	\$141,196	\$145,458	+3.0
Middle Atlantic.....	396	51,487	51,942	+0.9	947,776	951,138	+0.4
East North Central.....	385	35,102	35,834	+2.1	630,205	636,190	+0.9
West North Central.....	215	13,459	13,648	+1.4	198,619	200,962	+1.2
South Atlantic.....	194	18,186	13,908	-23.5	265,763	206,234	-22.4
East South Central.....	73	5,951	5,765	-3.1	78,150	74,107	-5.2
West South Central.....	152	9,613	9,415	-2.1	130,633	132,351	+1.3
Mountain.....	114	3,925	3,887	-1.0	67,163	66,918	-0.4
Pacific.....	371	18,564	18,120	-2.4	360,730	352,119	-2.4
<b>All divisions.....</b>	<b>2,018</b>	<b>164,726</b>	<b>161,235</b>	<b>-2.1</b>	<b>2,820,235</b>	<b>2,765,477</b>	<b>-1.9</b>

<sup>1</sup>See footnotes 4 to 12, p. 173.

## 9. Employment in Canning and Preserving in May, 1930

**C**ANNING and preserving establishments reported a decrease of 12.2 per cent in employment in May as compared with April and a decrease of 7.8 per cent in pay-roll totals. Increases in employment were shown in six of the nine geographic divisions but the seasonal decrease in the Pacific division coupled with smaller declines in the South Atlantic and East South Central geographic divisions resulted in a decrease in the combined total.

Reports were received from 726 establishments having in May 34,879 employees and pay-roll totals in one week of \$646,223.

Employment in May, 1930, was 6.0 per cent higher than in May, 1929, and pay-roll totals were 6.0 per cent smaller.<sup>a</sup>

Details by geographic divisions are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CANNING  
AND PRESERVING ESTABLISHMENTS IN APRIL AND MAY, 1930

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1930	May, 1930		April, 1930	May, 1930	
New England.....	63	1,659	2,443	+47.3	\$25,628	\$38,042	+48.4
Middle Atlantic.....	76	7,718	7,814	+1.2	166,234	164,933	-0.8
East North Central.....	190	5,747	6,027	+4.9	108,621	118,711	+9.3
West North Central.....	39	909	995	+9.5	17,079	19,401	+13.6
South Atlantic.....	80	2,559	2,336	-8.7	28,139	29,711	+5.6
East South Central.....	22	753	611	-18.9	10,333	9,913	-4.1
West South Central.....	29	1,373	1,425	+3.8	16,413	15,841	-3.5
Mountain.....	38	735	787	+7.1	21,714	22,889	+5.4
Pacific.....	189	18,259	12,441	-31.9	306,750	226,782	-26.1
<b>All divisions.....</b>	<b>726</b>	<b>39,712</b>	<b>34,879</b>	<b>-12.2</b>	<b>700,911</b>	<b>646,223</b>	<b>-7.8</b>

<sup>1</sup>See footnotes 4 to 12, p. 173.

## Indexes of Employment and Pay-Roll Totals—Mining, Quarrying, Public Utilities, Trade, Hotels, and Canning

**T**HE following table shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, telephone and telegraph companies, power-light-water plants, electric railroads, wholesale and retail trade, hotels, and canning and preserving, from January, 1929, to May, 1930, with the monthly average for 1929 as 100.

<sup>a</sup> For indexes of employment and pay-roll totals, see p. 200.

INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1929, TO MAY, 1930—MINING, QUARRYING, PUBLIC UTILITIES, TRADE, HOTELS,  
AND CANNING

[Monthly average, 1929=100]

Year and month	Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and non-metallic mining		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads <sup>1</sup>		Wholesale trade		Retail trade		Hotels		Canning and preserving	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1929																						
January.....	105.7	100.7	106.4	106.1	93.1	88.0	91.6	85.9	94.3	94.5	92.9	91.7	99.7	98.7	97.7	96.7	99.2	99.0	97.1	98.5	50.8	57.3
February.....	106.0	122.1	107.7	116.6	94.6	91.8	91.9	88.9	95.3	93.0	92.6	91.8	99.1	97.6	96.9	96.4	94.6	94.5	99.8	102.0	48.9	59.2
March.....	98.0	90.8	106.8	108.6	97.0	99.1	96.0	95.0	96.5	98.7	92.8	94.5	97.0	98.0	97.3	98.5	96.2	96.1	100.9	103.4	49.4	54.9
April.....	100.7	88.3	100.2	89.2	100.6	104.6	99.6	100.5	97.8	98.3	95.9	96.5	98.5	99.5	97.9	97.8	95.5	96.0	99.7	100.6	90.6	98.9
May.....	103.7	99.0	96.6	91.9	100.8	104.6	104.1	107.1	100.4	99.4	98.4	98.1	100.4	101.0	99.0	99.0	97.3	97.1	98.1	98.9	62.0	71.2
June.....	92.9	80.7	94.7	90.0	103.8	105.6	106.6	110.5	101.5	100.0	100.7	100.4	101.2	101.7	99.2	98.6	97.4	98.6	99.3	98.7	76.6	71.9
July.....	83.2	64.7	94.1	85.6	101.5	99.0	104.7	104.7	102.6	104.1	103.2	102.3	102.2	101.9	100.4	100.5	93.6	95.9	101.1	99.8	126.8	109.2
August.....	91.1	78.4	95.7	92.8	103.2	100.1	106.7	110.3	103.7	101.8	105.4	103.8	102.2	102.0	101.3	100.0	93.6	95.2	102.6	99.4	184.8	180.1
September.....	101.9	103.8	97.2	98.6	102.1	102.0	106.6	109.8	102.5	100.4	105.5	106.6	101.4	101.5	101.9	103.3	97.6	99.2	102.8	100.2	210.1	207.9
October.....	106.1	133.9	98.8	106.8	101.9	103.1	103.6	105.8	101.9	105.1	105.7	106.0	100.5	100.0	102.9	102.7	101.7	102.6	100.6	100.2	143.3	134.5
November.....	104.0	100.5	101.0	106.0	103.0	102.2	98.6	96.0	101.9	101.2	104.7	104.1	99.4	98.4	102.9	101.9	106.7	105.2	100.0	99.8	95.1	91.6
December.....	107.1	137.2	101.4	108.2	98.5	99.7	90.1	85.4	101.8	103.9	102.5	105.8	98.3	99.8	102.6	104.7	126.2	120.6	97.7	98.9	61.3	62.4
Average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1930																						
January.....	102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3
February.....	106.9	121.5	102.4	102.1	92.3	92.5	79.8	73.5	100.2	101.9	98.8	100.4	95.1	95.7	98.5	98.3	94.4	96.0	102.4	103.8	45.7	51.5
March.....	82.6	78.5	98.6	86.4	90.9	90.8	83.0	80.0	99.4	105.8	99.7	102.1	94.4	95.4	97.7	99.7	93.9	95.5	102.4	104.4	49.7	50.8
April.....	84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	98.9	103.4	100.7	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.1	100.3	74.8	72.6
May.....	93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	99.7	103.2	103.4	104.5	95.2	96.0	96.8	97.4	96.7	97.3	98.0	98.4	65.7	60.9

<sup>1</sup> Not including car building and repairing, electric railroads; see vehicles group, manufacturing industries, page 174, et seq.

## Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to April, 1930, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO APRIL, 1930  
[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2	85.4
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9	86.3
March.....	100.5	97.4	95.2	96.7	95.8	89.9	91.1	85.5
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9	-----
June.....	107.1	98.0	98.6	101.6	100.9	95.9	96.1	-----
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6	-----
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4	-----
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8	-----
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9	-----
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0	-----
December.....	99.4	96.0	97.1	98.2	91.9	89.7	88.8	-----
Average.....	104.1	98.3	97.9	100.0	97.5	93.9	93.3	186.1

<sup>1</sup> Average for 4 months.

## EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—APRIL, 1929, MARCH AND APRIL, 1930

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	April, 1929	March, 1930	April, 1930	April, 1929	March, 1930	April, 1930
<b>Professional, clerical, and general.</b>	<b>269,103</b>	<b>263,139</b>	<b>261,208</b>	<b>\$39,295,179</b>	<b>\$38,968,399</b>	<b>\$38,531,351</b>
Clerks.....	152,749	147,085	145,872	21,147,420	20,631,972	20,338,009
Stenographers and typists.....	24,722	24,364	24,220	3,231,662	3,226,286	3,202,695
<b>Maintenance of way and structures.</b>	<b>399,061</b>	<b>337,188</b>	<b>376,604</b>	<b>38,016,573</b>	<b>32,833,004</b>	<b>36,020,163</b>
Laborers, extra gang and work train.....	61,833	43,547	57,173	4,796,494	3,275,144	4,404,226
Laborers, track and roadway section.....	208,296	171,358	192,852	15,565,154	12,593,196	14,157,525
<b>Maintenance of equipment and stores.</b>	<b>457,320</b>	<b>429,624</b>	<b>424,047</b>	<b>64,132,669</b>	<b>59,902,372</b>	<b>58,110,814</b>
Carmen.....	99,203	91,406	90,727	15,958,813	14,511,458	14,135,372
Machinists.....	55,259	52,809	52,402	9,409,832	8,869,790	8,606,878
Skilled trades helpers.....	101,216	94,914	93,287	12,257,115	11,346,380	10,924,336
Laborers (shops, engine houses, power plants, and stores).....	37,374	35,834	34,969	3,562,080	3,516,694	3,334,589
Common laborers (shops, engine houses, power plants, and stores).....	52,413	48,201	47,572	4,392,217	3,983,335	3,877,879
<b>Transportation, other than train, engine and yard.</b>	<b>195,244</b>	<b>187,210</b>	<b>185,469</b>	<b>24,613,030</b>	<b>23,882,320</b>	<b>23,322,370</b>
Station agents.....	29,361	28,907	28,864	4,672,475	4,649,059	4,608,242
Telegraphers, telephoners, and towermen.....	23,177	22,439	22,276	3,577,280	3,563,481	3,430,065
Truckers (stations, warehouses, and platforms).....	34,324	31,065	30,319	3,344,843	2,991,300	2,873,693
Crossing and bridge flagmen and gatemen.....	20,675	20,070	20,031	1,589,072	1,565,680	1,562,514
<b>Transportation (yard masters, switch tenders, and hostlers).....</b>	<b>21,551</b>	<b>21,017</b>	<b>20,753</b>	<b>4,215,133</b>	<b>4,179,510</b>	<b>4,044,393</b>
<b>Transportation, train and engine.</b>	<b>306,345</b>	<b>291,551</b>	<b>287,611</b>	<b>63,004,182</b>	<b>59,225,796</b>	<b>57,675,905</b>
Road conductors.....	34,695	32,760	32,421	8,401,262	7,931,414	7,784,747
Road brakemen and flagmen.....	67,960	64,105	63,100	12,044,369	11,133,352	10,932,443
Yard brakemen and yard helpers.....	51,785	49,423	48,751	9,292,692	8,697,668	8,411,631
Road engineers and motormen.....	40,898	39,070	38,649	11,278,029	10,611,708	10,362,705
Road firemen and helpers.....	41,601	39,740	39,163	8,265,434	7,752,833	7,569,840
<b>All employees.....</b>	<b>1,648,624</b>	<b>1,529,729</b>	<b>1,555,692</b>	<b>233,276,766</b>	<b>218,991,491</b>	<b>217,704,996</b>



### Changes in Employment and Pay Rolls in Various States.

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, March to April, 1930		State, and industry group	Per cent of change, April to May, 1930	
	Employment	Pay roll		Employment	Pay roll
<b>Illinois</b>			<b>Maryland—Continued</b>		
Stone, clay, and glass products.....	+6.8	+7.5	Stone, clay, and glass products.....	+0.3	-2.2
Metals, machinery, and conveyances.....	-2.6	-.3	Metal products other than iron and steel.....	+.2	-.7
Wood products.....	-2.9	-4.4	Tobacco products.....	0	-7.2
Furs and leather goods.....	+.7	-7.1	Transportation equipment.....	-.6	+10.0
Chemicals, oils, paints, etc.....	+.3	+.7	Car building and repairing.....	-.7	-1.9
Printing and paper goods.....	-.8	-.5	Miscellaneous.....	-3.6	+.9
Textiles.....	+2.1	+2.0	All manufacturing.....	-1.4	-2.2
Clothing and millinery.....	-12.8	-24.7	Retail department stores.....	-6.3	-7.1
Food, beverages, and tobacco.....	-.5	+1.1	Wholesale establishments.....	-.5	-.4
Miscellaneous.....	+9.8	+19.4	Public utilities.....	+1.7	+2.4
All manufacturing.....	-2.0	-1.1	Coal mines.....	+1.2	-13.2
Trade, wholesale and retail services.....	-2.1	-.4	Hotels.....	+5.5	+.7
Public utilities.....	-1.7	-12.9	Quarries.....	+14.0	+32.1
Coal mining.....	+1.1	+8.2	Employment—index numbers (1925=100)		
Building and contracting.....	-7.9	-11.7			
All nonmanufacturing.....	+15.8	+9.2	March, 1930	April, 1930	
All industries.....	-.1	+3.9			
	-1.3	+.7			
<b>Iowa</b>			<b>Massachusetts</b>		
April to May, 1930			Boot and shoe cut stock and findings.....	114.2	104.6
Food and kindred products.....	+2.1		Boots and shoes.....	90.6	87.4
Textiles.....	-4.4		Bread and other bakery products.....	107.5	104.7
Iron and steel works.....	-1.0		Clothing, men's.....	88.0	87.3
Lumber products.....	-1.4		Clothing, women's.....	108.7	112.2
Leather products.....	-3.6		Confectionery.....	87.5	86.4
Paper products, printing and publishing.....	+1.3		Cotton goods.....	67.4	66.1
Patent medicines, chemicals, and compounds.....	-2.0		Dyeing and finishing textiles.....	92.8	93.3
Stone and clay products.....	+5.3		Electrical machinery, apparatus, and supplies.....	72.7	71.4
Tobacco and cigars.....	-2.2		Foundry and machine-shop products.....	106.5	105.2
Railway-car shops.....	+8.7		Furniture.....	86.8	85.2
Various industries.....	+.1		Hosiery and knit goods.....	66.1	72.5
All industries.....	+1.5		Leather, tanned, curried, and finished.....	96.3	93.5
<b>Maryland</b>			Paper and wood pulp.....	96.3	93.2
Food products.....	-3.4	-2.8	Printing and publishing.....	105.8	105.8
Textiles.....	-2.6	-6.0	Rubber footwear.....	84.4	80.1
Iron and steel and their products.....	-.2	-1.7	Rubber goods, tires, and tubes.....	71.5	71.2
Lumber and its products.....	-.4	-5.7	Silk goods.....	86.7	86.5
Leather and its products.....	-1.2	-7.3	Textile machinery and parts.....	77.6	75.4
Rubber tires.....	0	+3.9	Woolen and worsted goods.....	66.3	64.3
Paper and printing.....	+.4	+1.4	All industries.....	82.0	80.4
Chemicals and allied products.....	-6.6	-8.6			

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, April to May, 1930		State, and industry group	Per cent of change, April to May, 1930	
	Employment	Pay roll		Employment	Pay roll
<b>New York</b>			<b>New York—Continued</b>		
Stone, clay, and glass.....	+2.0	+1.8	Clothing and millinery.....	-6.3	-10.2
Miscellaneous stone and minerals.....	-5.5	-5.0	Men's clothing.....	-8.0	-8.7
Lime, cement, and plaster.....	+2.9	+5.3	Men's furnishings.....	-5.1	-5.8
Brick, tile, and pottery.....	+10.2	+11.9	Women's clothing.....	-9.3	-15.4
Glass.....	0	-1.4	Women's underwear.....	-4.8	-8.8
Metals and machinery.....	-1.2	-2.5	Women's head wear.....	-7.6	-14.0
Silver and jewelry.....	+2	-1.1	Miscellaneous sewing.....	-7	-4
Brass, copper, and aluminum.....	-1.1	-2.5	Laundrying and cleaning.....	+2.7	+5.0
Iron and steel.....	+8	-1.8	Food and tobacco.....	+3	+3.4
Structural and architectural iron.....	+2.3	+1	Flour, feed, and cereals.....	-2.6	-3.1
Sheet metal and hardware.....	+1	+9	Canning and preserving.....	+17.6	+14.4
Firearms, tools, and cutlery.....	+6	+1.3	Other groceries.....	-4	+6.6
Cooking, heating, and ventilating apparatus.....	-2.2	-8.0	Meat and dairy products.....	+4	+5.0
Machinery, including electrical apparatus.....	-2.2	-2.2	Bakery products.....	-3	-1.9
Automobiles, carriages, and airplanes.....	-4.2	-9.3	Candy.....	-7.7	-20.1
Railroad equipment and repair.....	+1.1	+1	Beverages.....	+13.8	+26.6
Boat and ship building.....	-2.0	-1.2	Tobacco.....	+1.2	+10.3
Instruments and appliances.....	-7	-2.2	Water, light, and power.....	+6	+8
Wood manufactures.....	-6	+4	All industries.....	-1.8	-2.9
Saw and planing mills.....	+3.3	+3.3	<b>Oklahoma</b>		
Furniture and cabinet work.....	-3.2	-1.1	Cottonseed-oil mills.....	-30.7	-24.3
Pianos and other musical instruments.....	-8	+1.5	Food production:		
Miscellaneous wood.....	+1	-1.3	Bakeries.....	-4.2	-3.3
Furs, leather, and rubber goods.....	(1)	-5.1	Confections.....	-2.2	-2.5
Leather.....	-3.8	-4	Creameries and dairies.....	-3	+3.7
Furs and fur goods.....	+8.9	+16.8	Flour mills.....	-10.1	+1.9
Shoes.....	-1.0	-11.4	Ice and ice cream.....	+6.7	+14.9
Other leather and canvas goods.....	+3.3	+3.7	Meat and poultry.....	-8.0	-6.4
Rubber and gutta percha.....	-4	+3	Lead and zinc:		
Pearl, horn, bone, etc.....	-8	-1.4	Mines and mills.....	+9.5	+8.0
Chemicals, oils, paints, etc.....	(1)	(1)	Smelters.....	+2.6	+8.4
Drugs and chemicals.....	-4	-9	Metals and machinery:		
Paints and colors.....	+9	+2.2	Auto repairs, etc.....	-22.4	-27.1
Oil products.....	-1.0	-7	Machine shops and foundries.....	+3.9	+3.3
Miscellaneous chemicals.....	+9	+7	Tank construction and erection.....	+17.3	+30.8
Paper.....	-4	-1.3	Oil industry:		
Printing and paper goods.....	-1.0	-1.7	Producing and gasoline manufacture.....	+23.6	+22.3
Paper boxes and tubes.....	-1.4	-5.6	Refineries.....	+4.7	+27.4
Miscellaneous paper goods.....	-2.4	-2.0	Printing: Job work.....	+2.8	+4.7
Printing and bookmaking.....	-7	-1.3	Public utilities:		
Textiles.....	-4.4	-5.8	Steam-railway shops.....	+0	-2.2
Silk and silk goods.....	-5.9	-9.6	Street railways.....	-7.4	-4.1
Wool manufactures.....	-8.0	-12.2	Water, light, and power.....	-3.7	-2.0
Cotton goods.....	-13.9	-14.4	Stone, clay, and glass:		
Knit goods (excluding silk).....	+3.4	+6.6	Brick and tile.....	-13.4	+14.8
Other textiles.....	-3.1	-2.9	Cement and plaster.....	-1.8	-3.3
			Crushed stone.....	-3.2	-7.5
			Glass manufacture.....	+2	+3
			Textiles and cleaning:		
			Textile manufacture.....	-9.2	+10.4
			Laundries, etc.....	-3.0	-1.0
			Woodworking:		
			Sawmills.....	+4.5	-1.0
			Millwork, etc.....	-2.1	-4.0
			All industries.....	+2.4	+8.5

<sup>1</sup> Less than one-half of 1 per cent change.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Index numbers (1923-1925=100) — employment		State, and industry group	Per cent of change, April to May, 1930	
	April, 1930	May, 1930		Employ- ment	Pay roll
<b>Pennsylvania</b>			<b>Texas—Continued</b>		
Metal products.....	99.1	92.4	Cotton textile mills.....	+15.0	
Transportation equipment.....	80.7	185.1	Cement plants.....	+1.0	
Textile products.....	105.9	99.4	Commercial printing.....	-5.9	
Foods and tobacco.....	101.0	112.1	Newspaper publishing.....	+3	
Stone, clay, and glass prod- ucts.....	84.5	75.9	Quarrying—nonmetallic mines.....	-19.8	
Lumber products.....	90.7	73.8	Public utilities.....	-2.1	
Chemical products.....	94.3	101.0	Retail stores.....	-4.4	
Leather and rubber prod- ucts.....	97.7	97.4	Wholesale stores.....	-1.1	
Paper and printing.....	101.0	98.2	Hotels.....	+7	
			Miscellaneous.....	-4.6	
All manufacturing.....	98.7	95.6	All industries.....	-1.8	
	Pay roll		<b>Wisconsin</b>		
			March to April, 1930		
			<b>Manual</b>		
Metal products.....	109.8	95.5	Logging.....	-16.6	-30.3
Transportation equipment.....	85.6	184.7	Mining:		
Textile products.....	113.3	89.2	Lead and zinc.....	+1.6	+5.6
Foods and tobacco.....	101.7	109.5	Iron.....	+4	-1.8
Stone, clay, and glass prod- ucts.....	85.3	72.9	Stone crushing and quarry- ing.....	+48.3	+66.1
Lumber products.....	92.8	70.1	Manufacturing:		
Chemical products.....	101.0	109.2	Stone and allied indus- tries.....	+19.7	+9.6
Leather and rubber prod- ucts.....	100.6	100.8	Metal.....	-1.1	-2.0
Paper and printing.....	110.8	108.1	Wood.....	-4.4	-3.6
All manufacturing.....	107.1	96.5	Rubber.....	+8.6	+14.2
	Per cent of change, April to May, 1930		Leather.....	-1.3	-3.3
			Paper.....	-1.8	-1.5
			Textiles.....	-8	-4.9
			Foods.....	+3.3	+2.9
			Printing and publishing.....	0	+1.2
			Chemicals (including soap, glue, and ex- plosives).....	-7	-1.8
			All manufacturing.....	-7	-1.5
<b>Texas</b>			<b>Nonmanual</b>		
Auto and body works.....	+1.1		Manufacturing, mines, and quarries.....	-1.1	-1.1
Bakeries.....	-2.4		Construction.....	+3.2	+3.3
Confectioneries.....	-13.2		Communication.....	-2	-1.1
Pure food products.....	-24.0		Wholesale trade.....	+1.1	-2.3
Ice cream factories.....	+25.3		Retail trade, sales force only.....	+8.8	+6.8
Flour mills.....	+1.3		Miscellaneous professional services.....	-3.7	-4.6
Ice factories.....	+6.9				
Meat packing and slaughter- ing.....	+1.8				
Cotton-oil mills.....	-26.5				
Cotton compresses.....	+19.7				
Men's clothing manufac- turing.....	-8				
Women's clothing manu- facturing.....	-10.3				
Brick, tile, and terra cotta shops.....	-6.1				
Foundries and machine shops.....	-6.8				
Structural-iron works.....	-4.7				
Railroad car shops.....	+3.7				
Electric railway car shops.....	+2.5				
Petroleum refining.....	-2.0				
Sawmills.....	-3.4				
Lumber mills.....	-1.8				
Furniture manufacturers.....	-9.6				
Paper-box manufacturers.....	-16.1				

1 Preliminary figures.



PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Yearly period

State, and industry group	Per cent of change, April, 1929, to April, 1930		State, and industry group	Per cent of change, May, 1929, to May, 1930	
	Employment	Pay roll		Employment	Pay roll
<b>California</b>			<b>New York</b>		
Stone, clay, and glass products	-12.2	-13.8	Stone, clay, and glass	-12.9	-18.1
Metals, machinery, and conveyances	-11.8	-10.9	Miscellaneous stone and minerals	-21.5	-24.8
Wood manufactures	-17.9	-17.1	Lime, cement, and plaster	-14.7	-17.6
Leather and rubber goods	-28.5	-29.7	Brick, tile, and pottery	-9.2	-18.3
Chemicals, oils, paints, etc.	-15.1	-16.0	Glass	-6.1	-7.9
Printing and paper goods	+1.1	-1.8	Metals and machinery	-14.9	-18.6
Textiles	-11.1	-11.0	Silver and jewelry	-5.6	-9.4
Clothing, millinery, and laundering	-5.0	-7.2	Brass, copper, and aluminum	-14.7	-20.0
Foods, beverages, and tobacco	-10.1	-18.2	Iron and steel	-16.1	-17.9
Miscellaneous	+3.9	+15.5	Structural and architectural iron	+6.9	+7.9
All industries	-11.8	-12.8	Sheet metal and hardware	-16.1	-17.6
Public utilities	+10.8	+12.3	Firearms, tools, and cutlery	-4.9	-7.2
Employment—index numbers (1925-1927 = 100)			Cooking, heating and ventilating apparatus	-12.8	-17.7
April, 1929			Machinery, including electrical apparatus	-16.0	-19.1
April, 1930			Automobiles, carriages, and airplanes	-33.9	-41.2
<b>Massachusetts</b>			Railroad equipment and repair	-8.9	-13.9
Boot and shoe cut stock and findings	102.8	104.6	Boat and ship building	+14.4	+17.5
Boots and shoes	91.6	87.4	Instruments and appliances	-7.5	-9.3
Bread and other bakery products	100.7	104.7	Wood manufactures	-13.1	-15.6
Clothing, men's	103.3	87.3	Saw and planing mills	-6.9	-2.2
Clothing, women's	148.0	112.2	Furniture and cabinet work	-16.5	-21.0
Confectionery	84.7	84.4	Pianos and other musical instruments	-23.4	-28.9
Cotton goods	80.1	66.1	Miscellaneous wood	-4.9	-6.3
Dyeing and finishing textiles	103.3	93.3	Furs, leather, and rubber goods	+1.1	-9.9
Electrical machinery, apparatus, and supplies	97.3	71.4	Leather	-7.7	+7.9
Foundry and machine-shop products	107.6	105.2	Furs and fur goods	+1.0	0
Furniture	94.9	85.2	Shoes	+5.4	-11.7
Hosiery and knit goods	75.5	72.5	Other leather and canvas goods	-3.7	-4.8
Leather, tanned, curried, and finished	94.8	93.5	Rubber and gutta percha	-29.2	-32.6
Paper and wood pulp	97.0	93.2	Pearl, horn, bone, etc.	-8.7	-8.1
Printing and publishing	104.4	105.8	Chemicals, oils, paints, etc.	+2.7	+3.3
Rubber footwear	87.7	80.1	Drugs and chemicals	-2.6	-2.2
Rubber goods, tires, and tubes	84.5	71.2	Paints and colors	-5.2	-4.6
Silk goods	89.6	86.5	Oil products	-4.8	-4.1
Textile machinery and parts	83.8	75.4	Miscellaneous chemicals	+15.5	+15.6
Woolen and worsted goods	79.8	64.3	Paper	-2.1	-5.0
All industries	90.2	80.4	Printing and paper goods	+7.7	+3.3
			Paper boxes and tubes	-2.9	-11.3
			Miscellaneous paper goods	-3.4	-1.5
			Printing and bookmaking	+1.9	+1.4
			Textiles	-15.5	-22.8
			Silk and silk goods	-14.6	-22.8
			Wool manufactures	-22.1	-34.3
			Cotton goods	-29.3	-36.8

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Yearly period—Continued

State, and industry group	Per cent of change, May, 1929, to May, 1930		State, and industry group	Index numbers (1923- 1925 = 100) — em- ployment	
	Employ- ment	Pay roll		May, 1929	May, 1930
<b>New York—Continued</b>			<b>Pennsylvania</b>		
Textiles—Continued.			Metal products.....	94.2	92.4
Knit goods (excluding silk).....	-6.3	-11.2	Transportation equipment.....	87.4	185.1
Other textiles.....	-10.0	-10.5	Textile products.....	102.8	99.4
Clothing and millinery.....	-6.3	-6.7	Foods and tobacco.....	109.5	112.1
Men's clothing.....	-8.0	-21.3	Stone, clay, and glass prod- ucts.....	82.4	75.9
Men's furnishings.....	-18.3	-22.2	Lumber products.....	75.4	73.8
Women's clothing.....	+1.4	+4.9	Chemical products.....	104.3	101.0
Women's underwear.....	-5.9	-11.0	Leather and rubber prod- ucts.....	97.3	97.4
Women's headwear.....	-8.2	+4.1	Paper and printing.....	99.4	98.2
Miscellaneous sewing.....	-12.7	-13.9	All industries.....	97.6	95.6
*Laundering and clean- ing.....	-9	+3.4		Pay roll	
Food and tobacco.....	-11.7	-10.7	Metal products.....	98.8	95.5
Flour, feed, and cereals.....	-16.4	-15.9	Transportation equipment.....	89.5	184.7
Canning and preserving.....	-8	-3.9	Textile products.....	99.9	89.2
Other groceries.....	-4.8	-5.6	Foods and tobacco.....	103.6	109.5
Meat and dairy prod- ucts.....	-2.1	-2.9	Stone, clay, and glass prod- ucts.....	80.7	72.9
Bakery products.....	-13.3	-13.2	Lumber products.....	70.8	70.1
Candy.....	-9.2	-13.3	Chemical products.....	113.3	109.2
Beverages.....	-3.7	+8.2	Leather and rubber prod- ucts.....	100.0	100.8
Tobacco.....	-34.4	-34.4	Paper and printing.....	112.9	108.1
Water, light, and power.....	+1.8	+5.3	All industries.....	100.6	96.5
All industries.....	-9.8	-12.9		Per cent of change, May, 1929, to May, 1930	
<b>Oklahoma</b>			<b>Texas</b>		
Cottonseed-oil mills.....	+51.7	+53.5	Auto and body works.....	-21.7	
Food production:			Bakeries.....	-9.4	
Bakeries.....	+22.0	+17.9	Confectioneries.....	-3.2	
Confections.....	+22.2	+27.0	Pure food products.....	-19.1	
Creameries and dairies.....	+61.7	+71.1	Ice cream factories.....	+32.9	
Flour mills.....	+13.1	+49.0	Flour mills.....	+5	
Ice and ice cream.....	-15.2	-10.9	Ice factories.....	-5.2	
Meat and poultry.....	-6.2	-10.1	Meat packing and slaugh- tering.....	+6.2	
Lead and zinc:			Cotton-oil mills.....	-42.0	
Mines and mills.....	-12.8	-16.7	Cotton compresses.....	+8.3	
Smelters.....	-37.7	-44.5	Men's clothing manufac- ture.....	-1.7	
Metals and machinery:			Women's clothing manu- facture.....	-13.3	
Auto repairs, etc.....	-19.2	-16.3	Brick, tile, and terra cotta.....	-24.7	
Machine shops and foundries.....	-2.6	-4.4	Foundries and machine shop.....	-21.0	
Tank construction and erection.....	+20.9	+15.0	Structural-iron works.....	-26.1	
Oil industry:			Railroad car shops.....	-3.5	
Producing and gasoline manufacture.....	+23.0	+24.0	Electric-railway car shops.....	-3.9	
Refineries.....	+16.6	+50.3	Petroleum refining.....	+13.6	
Printing: Job work.....	+6.6	+8.6	Sawmills.....	-1.1	
Public utilities:			Lumber mills.....	-27.1	
Steam railway shops.....	-10.1	-6.0	Furniture manufacturers.....	-18.6	
Street railways.....	+17.1	+19.0	Paper-box manufacturers.....	-3.4	
Water, light, and power.....	-5.4	-1.4	Cotton textile mills.....	+4.1	
Stone, clay, and glass:			Cement plants.....	-5.6	
Brick and tile.....	-20.8	-11.9	Commercial printing.....	-8.0	
Cement and plaster.....	-11.5	-8.5	Newspaper publishing.....	+11.9	
Crushed stone.....	-18.6	-13.0	Quarrying—non metallic mines.....	-48.3	
Glass manufacture.....	-1.5	-8.3	Public utilities.....	-7.5	
Textiles and cleaning:			Retail stores.....	-4.9	
Textile manufacture.....	-25.4	-23.3	Wholesale stores.....	-1.4	
Laundries, etc.....	-9.0	+4.3	Hotels.....	+5.6	
Woodworking:			Miscellaneous.....	-9.4	
Sawmills.....	-3	-5.6	All industries.....	-1.6	
Millwork, etc.....	-17.0	-19.1			
All industries.....	-1.1	-2.5			

¹ Preliminary figures.

## WHOLESALE AND RETAIL PRICES

### Retail Prices of Food in the United States

THE following tables are compiled from simple averages of the actual selling prices<sup>1</sup> received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food May 15, 1929, and April 15 and May 15, 1930, as well as the percentage changes in the year and in the month. For example, the retail price per pound of flour was 5.0 cents on May 15, 1929; 4.9 cents on April 15, 1930; and 4.8 cents on May 15, 1930.

These figures show decreases of 4 per cent in the year and 2 per cent in the month.

The cost of various articles of food combined shows a decrease of 2.1 per cent May 15, 1930, as compared with May 15, 1929, and a decrease of 0.7 per cent May 15, 1930, as compared with April 15, 1930.

Table 2 shows for the United States average retail prices of specified food articles on May 15, 1913, and on May 15 of each year from 1924 to 1930, together with percentage changes in May of each of these specified years, compared with May, 1913. For example, the retail price per pound of hens was 22.2 cents in May, 1913; 36.6 cents in May, 1924; 37.9 cents in May, 1925; 41.0 cents in May, 1926; 38.4 cents in May, 1927; 37.7 cents in May, 1928; 42.2 cents in May, 1929; and 37.4 cents in May, 1930. As compared with May, 1913, these figures show increases of 65 per cent in May, 1924; 71 per cent in May, 1925; 85 per cent in May, 1926; 73 per cent in May, 1927; 70 per cent in May, 1928; 90 per cent in May, 1929; and 68 per cent in May, 1930.

The cost of the various articles of food combined showed an increase of 55.3 per cent in May, 1930, as compared with May, 1913.

<sup>1</sup>In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.



TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE MAY 15, 1930, COMPARED WITH MAY 15, 1929, AND APRIL 15, 1930

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) decrease (—) May 15, 1930, com- pared with—	
		May 15, 1929	Apr. 15, 1930	May 15, 1930	May 15, 1929	Apr. 15, 1930
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak.....	Pound.....	50.4	48.3	48.3	-4	0
Round steak.....	do.....	44.9	43.1	43.0	-4	-0.2
Rib roast.....	do.....	37.2	35.9	35.6	-4	-1
Chuck roast.....	do.....	30.4	29.2	28.7	-6	-2
Plate beef.....	do.....	21.1	20.4	19.9	-6	-2
Pork chops.....	do.....	37.7	37.1	36.1	-4	-3
Bacon, sliced.....	do.....	43.4	42.5	42.3	-3	-0.4
Ham, sliced.....	do.....	55.1	53.9	54.0	-2	+0.2
Lamb, leg of.....	do.....	42.1	35.8	35.9	-15	+0.3
Hens.....	do.....	42.2	38.2	37.4	-11	-2
Salmon, red, canned.....	do.....	31.3	31.8	31.8	+2	0
Milk, fresh.....	Quart.....	14.2	14.0	14.0	-1	0
Milk, evaporated.....	16-oz. can.....	10.9	10.3	10.2	-6	-1
Butter.....	Pound.....	54.5	48.1	46.3	-15	-4
Oleomargarine (all butter substi- tutes).....	do.....	27.3	26.0	25.8	-5	-1
Cheese.....	do.....	38.0	36.0	35.8	-6	-1
Lard.....	do.....	18.4	16.8	16.7	-9	-1
Vegetable lard substitute.....	do.....	24.9	24.3	24.3	-2	0
Eggs, strictly fresh.....	Dozen.....	38.7	34.5	33.7	-13	-2
Bread.....	Pound.....	9.0	8.8	8.8	-2	0
Flour.....	do.....	5.0	4.9	4.8	-4	-2
Corn meal.....	do.....	5.3	5.3	5.3	0	0
Rolled oats.....	do.....	8.9	8.7	8.7	-2	0
Corn flakes.....	8-oz. package.....	9.5	9.4	9.4	-1	0
Wheat cereal.....	28-oz. package.....	25.5	25.5	25.4	-0.4	-0.4
Macaroni.....	Pound.....	19.7	19.5	19.5	-1	0
Rice.....	do.....	9.7	9.6	9.7	0	+1
Beans, navy.....	do.....	14.2	11.8	11.6	-18	-2
Potatoes.....	do.....	2.7	4.1	4.3	+59	+5
Onions.....	do.....	7.4	5.6	6.0	-19	+7
Cabbage.....	do.....	5.2	9.8	7.3	+40	-26
Pork and beans.....	No. 2 can.....	11.9	11.1	11.0	-8	-1
Corn, canned.....	do.....	15.9	15.4	15.4	-3	0
Peas, canned.....	do.....	16.7	16.4	16.3	-2	-1
Tomatoes, canned.....	do.....	13.2	12.6	12.8	-3	+2
Sugar.....	Pound.....	6.4	6.3	6.3	-2	0
Tea.....	do.....	77.6	77.5	77.5	-0.1	0
Coffee.....	do.....	49.5	41.4	40.9	-17	-1
Prunes.....	do.....	14.4	18.1	17.4	+21	-4
Raisins.....	do.....	11.6	12.1	12.0	+3	-1
Bananas.....	Dozen.....	31.9	30.6	30.6	-4	0
Oranges.....	do.....	41.3	60.9	66.7	+62	+10
Weighted food index.....					-2.1	-0.7

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE MAY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH MAY 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail prices on May 15—								Per cent of increase May 15 of each specified year compared with May 15, 1913							
	1913	1924	1925	1926	1927	1928	1929	1930	1924	1925	1926	1927	1928	1929	1930	
Sirloin steak.....pound..	Cts. 25.6	Cts. 40.6	Cts. 40.8	Cts. 41.5	Cts. 42.3	Cts. 46.1	Cts. 50.4	Cts. 48.3	59	59	62	65	80	97	89	
Round steak.....do.....	22.2	34.6	35.0	35.8	36.9	40.4	44.9	43.0	56	58	61	66	82	102	94	
Rib roast.....do.....	20.0	29.4	29.8	30.4	31.2	34.1	37.2	35.6	47	49	52	56	71	86	78	
Chuck roast.....do.....	16.1	21.3	22.1	22.5	23.5	26.6	30.4	28.7	32	37	40	46	65	89	78	
Plate beef.....do.....	12.2	13.4	14.0	14.6	15.2	18.2	21.1	19.9	10	15	20	25	49	73	63	
Pork chops.....do.....	20.9	29.9	36.0	40.3	36.4	35.4	37.7	36.1	43	72	93	74	69	80	73	
Bacon, sliced.....do.....	26.9	36.1	46.4	49.3	47.6	43.1	43.4	42.3	34	72	83	77	60	61	57	
Ham, sliced.....do.....	26.7	44.7	53.0	55.9	56.3	51.2	55.1	54.0	67	99	109	111	92	106	102	
Lamb, leg of.....do.....	19.4	39.4	38.6	39.9	41.0	41.5	42.1	35.9	103	99	106	111	114	117	85	
Hens.....do.....	22.2	36.6	37.9	41.0	38.4	37.7	42.2	37.4	65	71	85	73	70	90	68	
Salmon, red, canned.....pound..		31.1	31.2	37.9	32.5	35.4	31.3	31.8								
Milk, fresh.....quart..	8.8	13.6	13.7	13.9	13.9	14.1	14.2	14.0	55	56	58	58	60	61	59	
Milk, evaporated.....16-ounce can..		11.7	11.2	11.5	11.5	11.1	10.9	10.2								
Butter.....pound..	35.9	46.1	51.9	50.0	53.4	54.6	54.5	46.3	28	45	39	49	52	52	29	
Oleomargarine (all butter substitutes).....pound..		29.2	30.0	30.2	28.4	27.3	27.3	25.8								
Cheese.....do.....	21.9	34.6	36.3	36.0	37.0	38.1	38.0	35.8	58	66	64	69	74	74	63	
Lard.....do.....	15.8	17.1	22.6	21.5	19.0	18.1	18.4	16.7	8	43	36	20	15	16	06	
Vegetable lard substitute.....pound..		24.5	25.7	25.6	25.0	24.8	24.9	24.3								
Eggs, strictly fresh.....dozen..	26.3	32.8	39.3	38.9	33.6	37.5	38.7	33.7	25	49	48	28	43	47	28	
Bread.....pound..	5.6	8.7	9.4	9.4	9.4	9.1	9.0	8.8	55	68	68	68	63	61	57	
Flour.....do.....	3.3	4.6	6.1	6.1	5.5	5.6	5.0	4.8	39	85	85	67	70	52	45	
Corn meal.....do.....	2.9	4.4	5.4	5.1	5.1	5.3	5.3	5.3	52	86	76	76	83	83	83	
Rolled oats.....do.....		8.8	9.3	9.1	9.0	8.9	8.9	8.7								
Corn flakes.....8-ounce package..		9.7	11.0	11.0	10.1	9.5	9.5	9.4								
Wheat cereal.....28-ounce package..		24.3	24.6	25.4	25.5	25.6	25.5	25.4								
Macaroni.....pound..		19.5	20.5	20.3	20.0	19.9	19.7	19.5								
Rice.....do.....	8.6	9.9	11.0	11.7	10.6	10.0	9.7	9.7	15	28	36	23	16	13	13	
Beans, navy.....do.....		9.8	10.3	9.2	9.0	12.0	14.2	11.6								
Potatoes.....do.....	1.6	2.9	2.7	6.0	4.5	3.3	2.7	4.3	81	69	275	181	106	69	169	
Onions.....do.....		6.7	8.7	7.7	8.7	7.6	7.4	6.0								
Cabbage.....do.....		7.7	5.6	6.2	8.7	8.2	5.2	7.3								
Pork and beans.....No. 2 can..		12.7	12.5	11.9	11.6	11.4	11.9	11.0								
Corn, canned.....do.....		15.8	18.1	16.5	15.6	15.9	15.9	15.4								
Peas, canned.....do.....		18.1	18.5	17.5	16.8	16.8	16.7	16.3								
Tomatoes, canned.....No. 2 can..		13.0	13.8	11.9	12.1	11.6	13.2	12.8								
Sugar, granulated.....pound..	5.4	9.2	7.2	6.7	7.3	7.2	6.4	6.3	70	33	24	35	33	19	17	
Tea.....do.....	54.4	71.1	75.6	76.4	77.4	77.2	77.6	77.5	31	39	40	42	42	43	42	
Coffee.....do.....	29.8	42.2	52.2	51.0	48.2	49.0	49.5	40.9	42	75	71	62	64	66	37	
Prunes.....do.....		17.6	17.3	17.1	15.4	13.6	14.4	17.4								
Raisins.....do.....		15.5	14.5	14.7	14.3	13.6	11.6	12.0								
Bananas.....dozen..		36.6	37.3	35.4	33.9	32.7	31.9	30.6								
Oranges.....do.....		41.6	55.5	53.1	49.8	61.9	41.3	66.7								
All articles combined <sup>1</sup>									45.9	56.9	66.7	60.8	59.2	58.6	55.3	

<sup>1</sup> Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1929, and by months for 1928, 1929, and 1930. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO MAY, 1930

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year.....	100.0	100.0	100.0	1928—Continued.			
1914: Average for year.....	106.7	103.4	97.1	September.....	106.7	195.8	151.2
1915: Average for year.....	121.6	99.6	96.1	October.....	165.9	188.9	151.1
1916: Average for year.....	126.8	108.2	103.2	November.....	165.3	184.9	152.5
1917: Average for year.....	186.5	137.0	127.6	December.....	164.2	179.1	153.5
1918: Average for year.....	194.3	172.8	153.4	1929: Average for year.....	164.1	188.4	148.6
1919: Average for year.....	198.0	184.2	176.6	January.....	164.1	180.9	151.9
1920: Average for year.....	232.1	185.7	185.1	February.....	164.1	180.3	152.6
1921: Average for year.....	179.8	158.1	149.5	March.....	164.1	182.8	152.4
1922: Average for year.....	159.3	150.3	135.9	April.....	164.1	187.5	148.9
1923: Average for year.....	156.9	149.0	147.6	May.....	163.5	191.2	147.5
1924: Average for year.....	160.4	150.2	142.8	June.....	163.0	192.4	146.8
1925: Average for year.....	176.2	163.0	147.1	July.....	163.5	195.9	146.8
1926: Average for year.....	175.5	171.3	145.5	August.....	164.7	196.0	147.1
1927: Average for year.....	170.7	169.9	148.7	September.....	165.2	194.2	148.1
1928: Average for year.....	167.2	179.2	150.0	October.....	163.5	189.2	149.3
January.....	168.0	168.3	152.2	November.....	163.6	184.1	147.0
February.....	168.0	167.8	150.7	December.....	162.9	181.8	144.9
March.....	166.8	167.1	150.7	1930:			
April.....	167.2	170.3	147.8	January.....	162.9	183.6	138.9
May.....	168.3	175.4	147.3	February.....	161.6	183.1	138.5
June.....	169.8	177.7	146.1	March.....	160.9	183.0	137.6
July.....	169.3	184.4	147.1	April.....	160.3	183.3	138.9
August.....	168.2	189.5	148.3	May.....	159.9	181.5	137.0

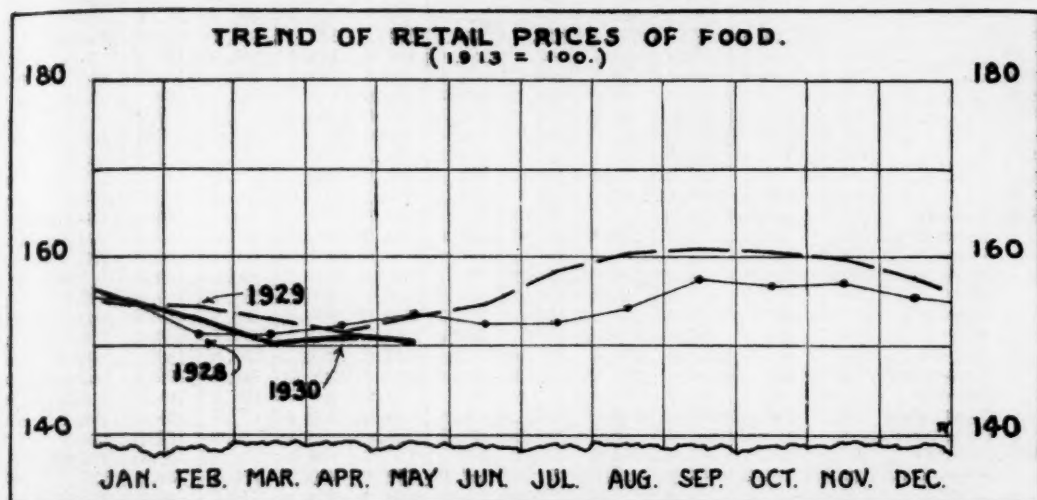
#### Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1929,<sup>2</sup> by months for 1929 and for January through May, 1930. These index numbers, or relative prices, are based on the year 1913 as 100, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1929 was 196.9, which means that the average money price for the year 1929 was 96.9 per cent higher than the average money price for the year 1913. As compared with the relative price, 188.2 in 1928, the figures for 1929 show an increase of 8.7 points, but an increase of 4.6 per cent in the year.

<sup>2</sup> For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45.



In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921,



the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 151.2 for April, 1930, and 150.1 for May, 1930.

The curve shown in the chart on this page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD,  
BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1929 AND 1930

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921.....	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	133.9
1922.....	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923.....	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924.....	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925.....	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926.....	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	166.6
1927.....	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929.....	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1929: January.....	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February.....	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9
March.....	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9
April.....	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4
May.....	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9
June.....	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9
July.....	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5
August.....	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0
September.....	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9
October.....	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5
November.....	194.1	196.4	183.3	183.8	171.1	170.5	159.3	200.4	177.0	161.8	139.7	171.0
December.....	192.5	194.6	181.8	183.1	170.2	163.3	157.4	198.5	174.2	161.8	134.7	170.6
1930: January.....	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	178.4	159.6	121.9	169.2
February.....	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	179.3	158.4	122.7	167.0
March.....	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	179.8	157.3	121.9	164.7
April.....	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	179.3	157.3	125.6	162.9
May.....	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	175.6	157.3	120.9	162.0

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All arti- cles <sup>1</sup>
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921.....	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	133.3
1922.....	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923.....	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924.....	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925.....	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926.....	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	190.6
1927.....	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928.....	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929.....	115.8	142.0	160.7	154.5	176.7	111.5	188.2	129.0	142.6	164.8	156.7
1929: January.....	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February.....	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March.....	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.6
April.....	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May.....	116.5	112.2	160.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June.....	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.5	165.8	154.8
July.....	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.3	165.8	158.5
August.....	116.5	140.0	160.7	157.6	176.7	112.6	235.3	120.0	142.5	165.4	160.2
September.....	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October.....	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5
November.....	113.9	183.5	158.9	157.6	176.7	111.5	223.5	121.8	142.3	162.1	159.7
December.....	111.4	182.0	158.9	154.5	180.0	110.3	223.5	120.0	142.8	155.4	158.0
1930: January.....	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
February.....	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	153.0
March.....	107.0	102.3	157.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
April.....	106.3	100.0	157.1	148.5	176.7	110.3	241.2	114.5	142.5	138.9	151.2
May.....	105.7	97.7	157.1	145.5	176.7	111.5	252.9	114.5	142.5	137.2	150.1

<sup>1</sup> 22 articles in 1913-1920; 42 articles in 1921-1930.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES

[Exact comparison of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound	Cts. 50.7	Cts. 48.0	Cts. 46.5	Cts. 49.2	Cts. 45.8	Cts. 45.6	Cts. 52.5	Cts. 49.7	Cts. 50.0	Cts. 74.5	Cts. 73.0	Cts. 71.9	Cts. 56.4	Cts. 54.7	Cts. 55.3
Round steak.....do	46.0	43.0	42.5	45.3	42.3	42.3	44.5	43.1	43.8	59.1	57.4	57.4	52.1	50.7	50.0
Rib roast.....do	36.2	33.7	32.8	35.8	35.3	35.2	36.1	33.6	33.6	44.0	43.0	42.9	42.5	39.8	39.3
Chuck roast.....do	30.9	27.8	27.9	29.7	28.0	27.8	29.5	29.0	29.3	34.8	34.0	33.2	35.3	33.8	31.9
Plate beef.....do	20.5	20.6	20.3	20.5	20.4	20.5	20.3	19.2	19.1	22.7	22.9	23.0	16.2	15.8	16.3
Pork chops.....do	35.3	35.5	34.0	37.1	36.0	34.5	34.2	35.2	35.1	39.5	39.5	38.1	40.3	39.8	38.8
Bacon, sliced.....do	41.5	39.0	38.7	37.8	38.9	38.4	42.4	39.1	39.2	43.7	40.4	40.8	48.0	47.9	47.5
Ham, sliced.....do	56.3	52.5	52.0	56.3	54.2	55.5	53.2	54.4	54.4	59.5	57.2	57.1	57.7	55.8	55.4
Lamb, leg of.....do	43.1	37.4	35.8	40.9	35.6	35.8	43.7	38.3	37.8	41.2	34.8	35.3	42.8	35.0	36.4
Hens.....do	38.1	36.3	34.5	44.2	39.8	40.1	35.8	34.4	32.8	46.6	39.9	39.9	47.2	40.8	40.6
Salmon, red, canned															
.....pound	34.0	33.4	33.4	28.0	27.8	27.8	32.9	32.5	32.5	30.8	31.3	31.1	30.3	32.0	31.3
Milk, fresh.....quart	16.5	16.0	16.0	14.0	14.0	14.0	16.7	17.0	17.0	15.5	15.5	15.5	16.0	16.0	16.0
Milk, evaporated															
.....16-ounce can	13.2	11.0	10.9	10.5	10.0	10.0	12.1	10.8	10.9	11.6	11.2	11.3	10.9	10.5	10.3
Butter.....pound	57.4	52.2	50.9	58.3	51.1	50.3	57.0	51.9	51.6	57.5	49.5	48.3	56.3	47.5	47.1
Oleomargarine (all butter substitutes)															
.....pound	28.7	26.9	26.7	28.2	28.0	27.6	31.2	29.0	29.1	29.0	28.7	27.9	25.8	25.8	25.6
Cheese.....do	37.1	33.5	32.7	36.3	35.1	35.0	37.6	33.2	33.0	39.5	37.5	37.4	43.8	40.2	40.2
Lard.....do	18.0	16.0	16.3	16.4	15.3	15.1	18.1	16.2	16.4	18.2	17.0	16.9	17.5	15.9	16.0
Vegetable lard substitute.....pound	22.8	20.1	20.3	23.4	22.8	22.7	21.4	21.4	21.5	25.5	25.8	25.8	25.7	25.4	25.3
Eggs, strictly fresh.....dozen	37.1	34.5	33.4	37.6	33.4	31.4	36.2	32.1	32.2	51.2	47.6	47.7	47.5	44.7	46.2
Bread.....pound	10.7	9.9	9.9	8.5	8.6	8.5	9.9	9.7	9.7	8.7	8.8	8.8	8.7	8.7	8.7
Flour.....do	6.5	5.9	5.8	4.7	4.6	4.5	6.4	6.1	5.9	5.4	5.3	5.1	5.0	5.0	4.9
Corn meal.....do	4.3	4.0	4.1	4.1	3.9	3.9	4.1	4.3	4.1	6.9	7.1	7.2	7.2	7.0	7.0
Rollod oats.....do	9.5	8.8	8.9	8.1	8.1	8.2	9.4	9.9	9.6	8.7	8.4	8.2	8.5	8.4	8.4
Corn flakes															
.....8-ounce package	9.7	9.7	9.7	8.7	8.8	8.8	9.9	9.4	9.5	9.4	9.2	9.2	9.3	9.2	9.2
Wheat cereal															
.....28-ounce package	27.2	26.8	27.0	24.2	24.1	23.9	27.2	27.1	27.3	25.3	25.1	25.1	24.6	24.7	24.6
Macaroni.....pound	21.5	20.5	20.4	19.1	19.0	19.0	18.2	17.6	17.6	21.0	21.8	21.7	22.2	21.1	21.1
Rice.....do	9.4	8.5	8.1	8.2	8.9	9.0	8.9	8.9	8.8	10.5	10.5	10.4	10.2	9.3	9.3
Beans, navy.....do	16.4	13.8	13.6	13.8	11.0	10.9	15.1	12.8	12.3	13.5	12.3	12.3	14.3	11.7	11.8
Potatoes.....do	3.5	4.6	4.5	2.4	3.9	4.3	3.9	4.9	4.9	2.5	4.0	3.9	2.1	3.5	3.5
Onions.....do	8.7	7.5	7.1	7.3	5.8	6.2	8.5	6.7	6.3	8.2	5.8	5.9	7.3	6.0	5.7
Cabbage.....do	4.5	8.5	6.6	4.9	10.3	6.8	4.8	9.6	6.6	6.0	11.0	8.1	5.4	10.5	8.5
Pork and beans															
.....No. 2 can	11.9	9.9	9.6	11.0	10.5	10.5	11.8	10.6	10.6	12.8	12.8	12.8	11.9	10.7	10.6
Corn, canned.....do	17.9	16.5	16.8	16.8	16.4	16.6	16.8	15.4	15.6	17.2	17.2	17.0	18.2	16.8	17.0
Peas, canned.....do	18.5	18.8	18.8	15.3	15.0	14.7	19.9	19.9	19.9	19.9	19.2	19.0	19.2	17.5	17.5
Tomatoes, canned															
.....No. 2 can	13.3	11.5	11.8	11.8	10.8	10.7	13.1	11.3	11.3	13.6	14.7	14.8	14.3	14.1	13.7
Sugar, granulated															
.....pound	7.0	6.5	6.5	5.4	5.3	5.3	6.8	6.3	6.4	6.2	6.2	6.2	6.3	6.1	5.9
Tea.....do	105.3	96.5	96.5	72.8	72.6	70.9	96.2	93.2	92.7	76.3	80.2	80.1	57.2	54.7	56.1
Coffee.....do	52.1	40.0	40.0	45.3	38.1	37.9	52.0	44.2	43.3	54.4	44.0	44.3	47.9	36.9	36.4
Prunes.....do	15.6	19.1	18.2	12.4	16.1	15.4	16.7	20.1	20.0	14.1	18.1	17.1	15.4	18.0	17.4
Raisins.....do	13.5	14.2	13.9	10.4	11.1	11.1	12.6	12.9	12.3	10.7	11.5	11.5	12.3	11.8	11.9
Bananas.....dozen	26.5	27.5	28.1	24.3	23.2	23.1	35.6	34.4	33.8	43.8	41.0	38.0	31.3	33.4	32.8
Oranges.....do	35.3	52.8	56.1	39.1	55.1	68.6	35.9	57.6	61.6	43.7	66.9	71.6	42.6	59.9	66.5

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	1930			1930			1930			1930			1930		
	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15
Sirloin steak.....pound..	Cts. 49.3	Cts. 48.1	Cts. 48.0	Cts. 40.2	Cts. 36.2	Cts. 38.3	Cts. 39.2	Cts. 38.5	Cts. 38.8	Cts. 53.3	Cts. 52.8	Cts. 52.6	Cts. 47.9	Cts. 45.5	Cts. 45.8
Round steak.....do.....	42.9	41.7	41.9	38.2	35.7	36.4	38.5	37.7	37.7	45.5	44.2	44.3	44.9	42.6	42.4
Rib roast.....do.....	36.2	35.1	34.5	34.5	32.1	33.1	32.9	31.0	30.6	40.2	39.6	39.4	38.4	38.3	37.8
Chuck roast.....do.....	31.0	30.2	28.7	28.8	27.2	27.5	27.4	24.2	24.6	33.0	33.7	32.5	29.7	28.2	27.9
Plate beef.....do.....	20.2	19.1	17.8	19.7	18.0	18.4	21.3	19.6	19.6	20.4	20.2	19.8	23.5	21.9	22.2
Pork chops.....do.....	40.0	38.1	37.8	36.7	35.4	35.6	35.2	35.2	35.2	37.6	37.3	35.1	35.7	34.8	34.4
Bacon, sliced.....do.....	40.1	38.9	39.3	48.8	48.0	48.7	36.3	36.9	37.1	47.7	46.8	46.9	38.6	38.9	38.9
Ham, sliced.....do.....	53.7	51.2	51.3	54.6	56.0	55.3	47.1	47.1	47.1	53.9	56.0	55.5	55.0	52.7	52.5
Lamb, leg of.....do.....	38.0	31.9	32.1	43.1	37.1	37.3	46.6	44.2	43.3	42.3	35.0	35.8	43.9	38.1	37.8
Hens.....do.....	44.1	39.1	37.6	37.9	35.5	35.8	42.9	38.0	38.0	45.0	39.6	38.7	45.7	40.5	38.0
Salmon, red, canned.....pound..	29.1	29.6	29.5	32.3	32.6	32.8	28.6	29.9	30.7	32.8	33.2	33.4	28.6	30.2	30.7
Milk, fresh.....quart.....	14.0	14.0	14.0	14.0	14.0	14.0	19.0	18.3	18.3	14.0	14.0	14.0	14.0	14.0	14.0
Milk, evaporated.....16-ounce can..	10.7	10.0	9.9	10.6	9.9	10.1	10.8	10.0	10.0	10.6	10.0	10.0	10.8	10.3	10.2
Butter.....pound.....	53.5	47.7	45.8	52.5	45.3	44.3	54.4	47.3	46.9	51.6	45.8	43.5	56.2	50.0	45.9
Oleomargarine (all butter substitutes).....pound..	26.1	25.5	25.9				28.9	27.2	27.3	26.6	25.1	24.8	28.0	26.3	26.3
Cheese.....do.....	39.3	37.4	36.8	37.6	36.9	35.8	34.2	33.3	32.8	42.0	40.0	40.3	38.9	38.2	37.8
Lard.....do.....	17.4	16.1	15.7	21.5	20.9	20.9	19.6	18.3	18.3	18.7	17.3	17.0	17.1	16.2	16.2
Vegetable lard substitute.....pound..	24.8	24.3	24.4	30.7	29.7	29.8	21.6	21.2	21.1	25.8	25.5	25.5	25.5	25.8	25.8
Eggs, strictly fresh.....dozen.....	40.8	37.0	36.9	41.3	39.6	39.0	37.3	35.6	33.8	41.6	36.9	35.0	36.6	32.7	29.5
Bread.....pound.....	8.3	8.1	8.1	9.8	9.7	9.7	11.0	10.8	10.9	9.9	9.4	9.4	8.6	8.7	8.7
Flour.....do.....	4.5	4.4	4.3	4.9	4.7	4.5	6.3	6.4	6.3	4.5	4.4	4.2	5.3	5.2	5.1
Corn meal.....do.....	5.2	5.0	5.0	6.4	6.1	6.2	4.0	4.1	4.1	6.8	6.9	6.9	4.5	4.8	4.9
Rolled oats.....do.....	8.6	8.4	8.4	8.1	8.6	8.3	9.3	9.3	9.2	8.2	8.1	8.1	8.9	9.0	9.0
Corn flakes.....8-ounce package..	9.3	9.0	8.9	10.3	10.2	10.2	10.0	10.0	10.0	9.1	9.2	9.2	9.6	9.8	9.7
Wheat cereal.....28-ounce package..	25.0	24.6	24.6	28.0	28.0	28.2	25.4	25.5	25.2	24.8	25.4	25.4	24.9	24.9	24.9
Macaroni.....pound.....	21.4	20.7	20.7	19.9	19.7	19.9	18.6	19.2	19.0	18.8	18.7	18.6	18.1	19.4	19.5
Rice.....do.....	9.0	9.1	9.1	10.6	11.0	11.3	6.7	6.8	6.7	10.5	10.1	10.2	9.4	9.9	9.9
Beans, navy.....do.....	14.6	11.3	11.0	13.4	11.7	11.5	15.2	14.4	14.4	14.0	12.1	11.9	13.8	10.2	10.0
Potatoes.....do.....	2.1	3.5	3.9	1.8	3.7	4.0	2.7	4.4	4.2	2.8	4.2	4.5	3.5	4.7	4.5
Onions.....do.....	7.7	7.0	6.7	9.4	5.0	5.9	8.7	7.3	6.5	7.4	5.4	5.9	7.5	6.7	6.7
Cabbage.....do.....	5.4	10.2	8.3	6.5	10.7	9.0	3.6	7.9	5.1	5.5	10.0	7.3	5.3	10.8	7.9
Pork and beans.....No. 2 can.....	10.3	9.8	9.8	13.7	13.2	12.7	11.4	10.0	9.8	12.6	11.5	11.7	11.5	11.1	11.3
Corn, canned.....do.....	16.2	15.3	15.3	14.8	14.3	14.3	15.0	14.6	14.8	15.7	15.4	15.2	15.6	15.9	15.9
Peas, canned.....do.....	15.5	15.4	15.4	14.2	14.6	14.6	16.3	16.5	16.4	16.4	16.0	16.0	16.5	16.9	16.9
Tomatoes, canned.....No. 2 can.....	13.8	13.5	13.5	12.4	13.7	13.7	11.8	10.5	10.3	14.2	13.9	14.0	14.0	13.4	13.1
Sugar, granulated.....pound.....	6.0	6.0	6.0	7.5	7.5	7.5	6.1	6.1	6.1	6.3	6.4	6.4	6.5	6.7	6.7
Tea.....do.....	68.3	67.5	67.5	82.6	79.6	80.7	84.0	84.9	85.4	70.5	73.0	72.6	79.3	80.5	80.0
Coffee.....do.....	47.8	39.1	38.8	55.1	48.1	47.1	47.1	39.5	39.5	47.9	41.5	40.9	46.1	38.8	38.3
Prunes.....do.....	14.1	17.8	17.2	14.3	18.5	18.8	12.6	16.5	16.3	16.4	18.2	17.5	14.3	18.9	18.0
Raisins.....do.....	11.0	11.9	12.0	13.5	13.4	13.2	10.0	11.0	11.1	11.5	12.5	12.2	12.0	12.2	12.1
Bananas.....dozen.....	39.3	38.5	38.3	13.0	14.5	13.3	22.8	25.0	25.0	37.8	38.8	38.4	36.0	37.8	37.2
Oranges.....do.....	48.4	61.7	67.0	45.0	66.7	64.1	30.0	46.0	76.3	42.0	64.7	69.6	39.9	63.2	69.4

\* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound	Cts. 49.4	Cts. 44.8	Cts. 44.1	Cts. 49.2	Cts. 46.5	Cts. 47.3	Cts. 47.8	Cts. 47.7	Cts. 47.5	Cts. 42.6	Cts. 39.0	Cts. 39.1	Cts. 53.0	Cts. 47.9	Cts. 48.0
Round steak.....do	43.4	39.6	39.3	44.4	42.9	42.7	45.3	46.2	46.2	39.0	35.9	36.3	44.6	39.4	39.3
Rib roast.....do	35.2	34.2	33.1	93.5	37.5	37.9	38.3	37.8	37.0	32.5	29.9	29.8	39.5	35.4	34.7
Chuck roast.....do	32.2	30.4	29.0	32.5	31.4	30.7	31.8	30.1	30.1	27.2	25.1	25.2	32.0	29.1	28.0
Plate beef.....do	20.6	20.7	19.4	23.3	24.0	23.3	24.5	24.7	24.4	17.9	17.1	17.0	21.8	19.6	18.6
Pork chops.....do	38.8	37.5	36.1	36.0	37.0	35.8	37.0	36.7	35.3	35.4	34.7	33.7	41.3	38.5	37.4
Bacon, sliced.....do	41.6	40.5	40.6	45.4	44.1	44.3	45.2	40.9	40.9	41.8	40.4	40.2	44.2	41.8	41.7
Ham, sliced.....do	55.7	53.3	53.0	53.6	52.9	53.3	57.5	55.4	55.4	55.5	52.4	53.0	60.6	55.5	56.2
Lamb, leg of.....do	40.6	33.4	33.5	47.0	37.7	40.4	46.9	40.7	40.1	38.9	31.8	32.1	43.6	35.5	34.1
Hens.....do	42.3	39.1	36.6	42.3	39.4	39.4	35.9	33.8	34.3	34.8	31.2	31.0	45.1	39.5	38.0
Salmon, red, canned															
.....pound	31.3	31.9	32.3	31.5	30.9	30.9	32.6	33.4	33.5	31.7	33.6	33.7	29.9	31.4	31.3
Milk, fresh.....quart	12.0	12.0	12.0	12.0	12.0	12.0	13.0	13.0	13.0	12.0	11.3	11.3	14.0	13.0	13.0
Milk, evaporated															
.....16-ounce can	10.9	9.9	9.8	11.2	10.8	10.6	13.2	11.9	11.9	10.1	10.0	9.9	10.5	10.1	9.8
Butter.....pound	54.9	49.1	46.7	53.8	46.5	45.0	56.3	49.8	48.8	49.3	44.8	41.3	54.3	48.0	45.3
Oleomargarine (all butter substitutes)															
.....pound	28.5	27.6	27.0	27.5	25.9	25.9	28.6	27.1	27.2	24.3	24.0	23.0	25.1	24.2	23.9
Cheese.....do	40.4	40.5	39.9	37.8	36.8	37.2	38.0	34.4	35.4	38.7	36.9	36.9	39.7	35.2	35.5
Lard.....do	19.8	17.7	17.7	15.5	14.5	14.3	20.6	21.1	21.0	18.4	16.4	16.3	18.1	16.4	15.9
Vegetable lard substitute.....pound	26.4	26.2	26.1	27.1	26.8	26.8	23.8	20.9	20.5	21.7	20.1	20.3	25.9	26.0	25.8
Eggs, strictly fresh															
.....dozen	40.9	35.5	32.8	34.7	29.5	27.7	33.3	31.5	31.0	33.5	29.3	28.3	41.1	32.7	32.6
Bread.....pound	7.8	7.8	7.8	7.7	7.7	7.7	9.1	7.9	7.6	7.6	7.6	7.7	8.1	8.0	8.0
Flour.....do	5.0	5.0	4.9	4.8	4.6	4.6	5.1	5.0	5.0	3.8	3.8	3.8	4.8	4.7	4.5
Corn meal.....do	5.5	5.1	5.1	4.2	4.0	4.0	4.5	4.6	4.6	4.5	4.6	4.6	6.1	6.1	6.1
Rolled oats.....do	9.0	9.1	9.3	9.0	9.1	9.1	9.9	9.8	9.8	7.5	7.5	7.5	9.0	8.7	8.5
Corn flakes															
.....8-ounce package	9.8	9.9	9.9	10.0	9.6	9.6	9.7	9.6	9.6	9.7	9.5	9.7	9.7	9.4	9.6
Wheat cereal															
.....28-ounce package	25.7	25.5	25.2	26.3	26.3	26.3	27.4	27.0	27.0	24.7	24.8	24.7	26.6	26.9	26.7
Macaroni.....pound	20.8	18.8	18.8	20.0	19.6	19.4	21.5	20.5	20.4	19.6	19.6	19.6	21.0	19.4	19.2
Rice.....do	10.3	10.1	9.9	11.0	11.2	11.1	10.8	10.4	10.5	8.7	8.9	8.6	11.2	10.3	10.4
Beans, navy.....do	14.9	11.3	11.0	14.4	10.2	10.2	15.3	14.0	14.2	12.8	10.7	10.3	13.8	10.8	10.9
Potatoes.....do	3.0	4.1	4.6	2.2	4.0	4.3	4.2	5.7	5.7	2.5	3.9	4.7	1.7	3.8	3.7
Onions.....do	7.2	5.4	6.1	8.4	6.6	7.1	7.8	7.5	7.6	6.3	3.9	4.9	6.3	5.5	5.8
Cabbage.....do	5.7	10.2	7.6	6.2	10.1	9.4	4.9	8.4	6.7	4.6	9.0	6.6	5.6	9.7	7.7
Pork and beans															
.....No. 2 can	12.1	11.4	11.3	11.9	10.9	10.9	13.5	11.5	11.5	11.8	10.9	10.9	12.2	10.7	10.7
Corn, canned.....do	16.5	16.1	16.3	13.8	15.1	15.1	18.2	17.1	17.0	14.3	14.2	14.1	15.5	15.4	15.3
Peas, canned.....do	17.2	16.7	16.8	14.8	15.2	15.2	21.6	21.6	21.5	15.3	15.4	15.3	15.8	15.4	14.9
Tomatoes, canned															
.....No. 2 can	14.0	13.9	13.8	13.4	13.3	13.4	14.0	13.0	13.0	12.2	13.5	13.6	13.4	12.6	12.5
Sugar, granulated															
.....pound	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.8	6.8	7.0	7.1	6.9	6.7	6.7	6.5
Tea.....do	82.7	83.5	83.2	87.8	88.6	89.4	104.9	101.7	98.8	69.3	71.0	71.0	72.5	79.3	79.0
Coffee.....do	51.8	42.5	42.3	49.3	42.3	42.5	58.2	49.7	49.5	49.6	44.1	43.3	49.2	41.0	40.4
Prunes.....do	14.2	19.3	18.2	15.8	19.5	18.1	18.5	20.9	20.7	15.8	19.8	17.0	15.8	18.1	17.4
Raisins.....do	11.6	11.8	11.6	11.0	12.0	12.0	13.0	13.5	13.5	10.9	12.2	12.1	11.3	12.3	12.2
Bananas.....dozen	9.4	8.7	8.8	40.0	37.5	36.3	35.0	31.7	33.3	9.7	8.1	8.2	34.0	31.1	31.4
Oranges.....do	46.3	67.0	67.0	41.5	65.1	69.6	46.4	58.6	57.9	41.3	62.3	68.	11.3	60.4	64.5

\* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	<sup>1</sup> 68.1	<sup>2</sup> 67.9	<sup>3</sup> 66.8	43.6	42.5	43.5	49.7	46.6	46.1	40.5	40.9	40.9	49.4	47.4	47.1
Round steak.....do.....	55.0	53.8	53.5	44.1	41.7	41.5	47.0	45.1	44.6	36.5	36.4	36.4	44.8	42.2	42.7
Rib roast.....do.....	37.6	37.3	37.3	33.6	34.2	34.5	35.6	34.9	33.8	33.0	32.0	31.1	34.9	33.8	34.2
Chuck roast.....do.....	30.9	29.8	29.8	27.3	27.3	26.8	32.2	30.9	30.4	26.1	25.7	25.0	28.0	27.5	27.4
Plate beef.....do.....	17.2	15.7	15.7	24.2	24.0	23.3	21.6	20.7	20.4	17.4	17.2	16.8	20.5	20.1	19.9
Pork chops.....do.....	36.6	37.3	37.7	34.1	35.4	33.5	36.0	36.1	34.9	32.0	33.5	33.5	35.8	36.9	35.6
Bacon, sliced.....do.....	38.6	37.9	37.9	40.5	39.2	39.1	41.5	41.1	41.1	37.8	36.9	36.4	41.1	41.2	40.5
Ham, sliced.....do.....	54.3	52.5	53.2	51.4	50.8	50.5	55.0	55.2	54.9	49.0	50.0	50.0	53.2	51.1	51.8
Lamb, leg of.....do.....	43.0	34.5	36.2	34.2	36.7	35.8	44.6	39.4	38.1	41.3	36.0	36.4	37.7	33.7	33.8
Hens.....do.....	49.4	42.9	42.5	41.4	38.1	36.5	44.2	40.2	39.0	38.0	36.2	35.1	36.7	34.9	33.4
Salmon, red, canned.....pound..	32.9	32.5	32.8	29.5	29.9	29.5	38.2	34.4	34.4	30.4	30.8	31.4	34.3	35.1	34.9
Milk, fresh.....quart..	15.0	15.0	15.0	15.0	15.0	15.0	12.0	12.0	12.0	20.3	18.0	17.7	13.0	13.0	13.0
Milk, evaporated.....16-ounce can..	11.8	11.2	11.0	10.4	9.7	9.7	10.4	9.8	9.9	11.0	10.3	10.3	10.9	10.2	10.2
Butter.....pound..	55.9	46.7	45.2	53.3	50.2	46.1	54.8	47.6	46.1	56.4	48.5	48.1	52.0	45.7	43.3
Oleomargarine (all butter substitutes).....pound..	27.9	27.0	26.0	24.9	23.6	23.2	28.4	27.1	27.1	28.8	24.3	24.1	25.6	23.9	23.5
Cheese.....do.....	41.0	39.4	39.1	32.6	30.0	29.5	41.0	39.0	38.4	36.4	31.9	32.0	36.4	35.4	34.7
Lard.....do.....	17.5	15.8	15.7	20.9	19.2	19.0	16.0	15.3	15.0	19.3	17.4	17.5	18.5	16.3	16.5
Vegetable lard substitute.....pound..	26.7	26.1	26.3	16.4	15.6	15.8	26.9	27.1	26.7	22.5	20.9	20.3	25.6	25.7	25.6
Eggs, strictly fresh.....dozen..	47.3	40.0	41.5	32.1	28.9	26.1	36.1	30.1	29.7	35.4	32.5	32.1	35.7	31.8	30.0
Bread.....pound..	8.5	8.5	8.5	8.4	8.2	8.2	7.9	8.0	8.0	10.0	10.2	10.2	9.5	8.8	8.8
Flour.....do.....	5.5	5.3	5.3	4.8	4.6	4.6	5.1	4.9	4.9	5.9	5.4	5.4	4.6	4.7	4.7
Corn meal.....do.....	6.5	6.2	6.3	4.1	4.6	4.3	4.2	4.5	4.5	4.3	4.0	4.0	5.3	5.4	5.3
Rolled oats.....do.....	9.5	9.4	9.4	8.4	8.0	8.0	8.7	8.8	8.8	9.3	9.0	9.3	8.9	9.0	9.1
Corn flakes.....8-ounce package..	10.0	9.5	9.5	9.0	9.1	9.3	9.5	9.5	9.5	9.7	9.8	9.5	9.6	9.6	9.5
Wheat cereal.....28-ounce package..	24.7	24.9	24.9	25.5	25.6	25.4	25.7	26.4	26.1	25.2	25.4	26.1	27.2	27.3	27.2
Macaroni.....pound..	23.8	24.2	24.2	18.1	18.0	17.8	18.2	18.8	19.2	19.1	19.3	19.1	20.1	20.0	20.4
Rice.....do.....	10.6	10.6	10.7	7.0	7.3	7.3	10.4	11.0	11.1	7.3	7.8	8.1	9.1	9.2	9.2
Beans, navy.....do.....	13.8	12.8	12.8	14.7	13.5	13.0	14.2	9.9	10.5	14.4	12.6	12.8	14.4	11.1	10.8
Potatoes.....do.....	2.3	3.7	3.6	4.4	5.2	5.0	2.4	4.0	4.5	2.6	4.3	4.2	2.0	4.3	4.4
Onions.....do.....	7.1	5.1	5.8	5.8	5.7	5.3	8.5	6.0	6.9	8.1	6.3	6.6	8.2	7.1	6.9
Cabbage.....do.....	5.8	11.6	8.4	4.5	8.3	5.7	5.4	9.8	8.3	3.4	6.0	4.8	5.2	9.8	7.4
Pork and beans.....No. 2 can..	12.5	12.3	12.3	11.1	10.1	9.9	10.9	11.1	11.0	10.6	10.3	10.1	12.6	11.8	11.9
Corn, canned.....do.....	15.8	15.9	15.9	14.1	13.5	13.5	14.2	14.0	14.0	17.0	16.7	16.1	14.7	15.0	14.9
Peas, canned.....do.....	18.5	18.3	18.1	15.7	14.8	14.4	14.7	15.0	15.0	18.3	18.5	18.5	15.6	16.0	15.9
Tomatoes, canned.....No. 2 can..	13.7	12.5	12.7	11.9	10.7	10.2	14.2	13.6	13.4	11.4	10.2	10.0	13.9	13.0	13.0
Sugar, granulated.....pound..	6.2	6.2	6.0	6.5	6.2	6.1	6.8	6.8	6.7	6.6	6.4	6.4	7.0	6.8	6.9
Tea.....do.....	59.1	58.2	60.0	86.8	87.3	87.7	89.8	92.5	93.3	97.4	93.1	91.3	92.6	88.5	89.0
Coffee.....do.....	50.8	44.2	43.5	44.8	34.3	34.7	48.1	42.2	40.4	47.5	40.2	39.9	51.9	43.6	42.3
Prunes.....do.....	13.0	17.1	16.1	14.3	17.7	17.0	16.7	21.0	21.0	14.1	18.5	18.8	14.8	19.2	19.1
Raisins.....do.....	12.4	12.2	12.0	10.6	10.4	10.1	13.5	13.5	13.5	11.7	12.4	11.2	12.2	13.4	13.2
Bananas.....dozen..	<sup>1</sup> 8.4	<sup>2</sup> 7.6	<sup>3</sup> 7.7	25.4	24.6	23.8	31.3	31.3	30.6	26.4	26.1	27.2	<sup>1</sup> 9.5	<sup>2</sup> 8.8	<sup>3</sup> 11.1
Oranges.....do.....	43.8	66.3	76.3	36.3	56.3	54.6	47.0	62.3	64.6	24.3	48.7	54.2	37.6	61.7	68.8

<sup>1</sup> Per pound.<sup>2</sup> The steak for which prices are quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	1929			1930			1929			1929			1929		
	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15
Sirloin steak.....pound	Cts. 47.8	Cts. 46.2	Cts. 45.5	Cts. 45.6	Cts. 44.2	Cts. 43.9	Cts. 46.4	Cts. 44.5	Cts. 45.0	Cts. 64.8	Cts. 62.2	Cts. 62.5	Cts. 47.3	Cts. 46.8	Cts. 46.1
Round steak.....do	43.8	42.5	42.1	38.6	38.0	38.1	43.3	38.7	38.9	52.5	51.6	51.9	44.8	43.9	43.6
Rib roast.....do	37.8	36.2	35.7	35.5	35.1	35.0	34.7	32.5	32.7	35.3	34.5	34.3	34.1	34.0	34.0
Chuck roast.....do	30.3	30.0	29.4	27.2	27.0	26.7	28.0	26.6	26.4	30.2	29.6	29.5	29.7	29.6	28.5
Plate beef.....do	23.3	21.8	23.2	19.2	17.8	17.0	23.5	22.8	22.5	22.0	21.6	21.2	22.6	22.3	22.0
Pork chops.....do	34.5	34.9	34.2	43.4	41.9	41.8	33.6	32.0	31.3	36.5	36.5	35.4	33.6	33.9	32.4
Bacon, sliced.....do	44.5	41.8	41.1	48.9	46.0	46.3	45.0	42.5	42.0	37.1	36.5	36.3	35.8	34.9	34.6
Ham, sliced.....do	53.5	51.6	51.5	68.2	65.7	66.7	50.0	50.0	49.5	47.8	46.9	46.4	53.5	53.3	52.9
Lamb, leg of.....do	40.0	37.8	37.4	39.5	35.1	33.2	46.0	37.7	37.7	39.8	35.2	35.7	39.9	34.6	35.1
Hens.....do	33.4	30.9	30.4	46.2	43.5	43.2	39.3	37.9	37.3	45.0	41.4	41.4	37.4	33.0	32.0
Salmon, red, canned															
.....pound	30.9	31.2	30.6	30.8	30.8	28.9	30.4	30.5	29.6	31.4	31.2	31.2	35.6	33.8	33.8
Milk, fresh.....quart	15.0	14.0	14.0	15.0	15.0	15.0	13.0	12.0	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated															
.....16-ounce can	11.5	10.3	10.3	9.9	9.4	9.2	11.3	10.5	10.5	12.3	11.4	11.4	11.3	10.2	10.0
Butter.....pound	55.5	49.7	48.8	54.1	48.1	46.1	56.1	50.6	46.6	55.4	48.3	47.3	55.5	48.4	47.7
Oleomargarine (all butter substitutes)															
.....pound	27.4	24.9	24.9	24.5	24.3	24.0	25.9	26.1	26.3	28.1	26.9	26.6	25.0	23.4	23.4
Cheese.....do	36.5	34.4	34.1	38.3	36.6	36.7	37.8	35.6	36.7	38.4	36.9	35.7	35.3	32.2	31.7
Lard.....do	20.5	19.1	18.9	20.5	17.3	16.8	17.2	16.0	16.0	17.6	16.4	16.4	15.9	14.3	14.5
Vegetable lard substitute.....pound	21.7	20.7	21.1	24.8	22.9	22.6	26.3	26.2	26.2	26.2	26.4	26.4	22.1	21.9	22.0
Eggs, strictly fresh															
.....dozen	33.1	29.3	29.0	41.0	34.7	34.7	35.9	30.3	28.8	45.3	38.9	39.7	34.6	31.4	29.3
Bread.....pound	9.4	9.3	9.4	8.6	8.6	8.6	9.4	8.6	8.6	8.1	8.1	8.1	9.3	9.0	9.0
Flour.....do	6.0	5.7	5.7	4.9	4.7	4.6	5.8	5.4	5.2	4.9	5.0	4.9	5.9	5.7	5.7
Corn meal.....do	4.0	4.1	4.1	5.7	5.6	5.6	4.1	4.0	4.1	5.3	5.3	5.5	4.0	4.1	4.1
Rollod oats.....do	10.3	10.3	10.2	10.0	9.7	9.6	8.5	8.8	8.9	8.7	8.1	8.2	9.0	8.8	8.6
Corn flakes															
.....8-ounce package	9.8	9.8	9.8	9.5	9.4	9.4	9.4	9.5	9.5	9.1	9.2	9.2	9.7	9.7	9.8
Wheat cereal															
.....28-ounce package	27.3	27.2	26.7	25.0	24.9	24.9	26.4	27.3	27.4	25.6	25.6	25.6	25.8	27.1	27.0
Macaroni.....pound	20.2	20.2	20.2	18.0	17.5	17.5	18.4	18.6	18.4	23.3	23.4	23.4	19.5	19.9	19.7
Rice.....do	8.2	8.5	8.4	9.9	9.0	9.1	10.3	10.3	10.2	8.5	9.1	9.1	8.6	8.7	8.7
Beans, navy.....do	14.7	13.8	13.6	13.7	12.1	12.0	14.7	10.1	10.2	13.6	11.5	11.9	14.7	12.2	12.5
Potatoes.....do	3.1	4.5	4.5	3.1	4.6	4.4	4.0	4.4	4.6	2.2	3.6	3.7	3.3	4.6	4.8
Onions.....do	8.3	6.2	6.5	6.9	4.3	4.6	7.9	6.8	6.7	8.1	5.9	5.8	6.4	5.3	5.5
Cabbage.....do	4.5	9.1	6.0	4.4	5.7	4.2	5.2	10.8	8.5	6.1	11.2	8.9	4.0	8.2	5.9
Pork and beans															
.....No. 2 can	13.0	10.9	10.9	11.7	10.9	10.7	11.1	10.1	10.2	13.4	14.2	14.2	12.2	11.1	11.1
Corn, canned.....do	16.2	17.0	17.0	15.6	14.4	14.4	14.9	15.1	14.9	16.6	16.0	15.9	14.7	14.7	14.5
Peas, canned.....do	18.2	19.4	19.4	16.8	15.2	15.2	15.1	15.0	15.0	17.8	17.6	17.6	16.2	15.6	15.8
Tomatoes, canned															
.....No. 2 can	13.2	13.2	13.3	15.1	14.7	14.3	13.5	11.8	12.2	13.8	12.9	13.1	11.8	10.8	11.0
Sugar, granulated															
.....pound	7.1	7.3	7.4	6.0	6.0	6.0	7.1	7.0	7.0	6.5	6.5	6.4	6.4	6.4	6.5
Tea.....do	106.3	105.4	105.4	74.5	73.6	73.4	92.7	90.8	89.9	63.6	61.1	61.1	96.4	93.7	94.5
Coffee.....do	54.7	46.9	45.9	53.4	45.6	44.4	49.8	42.7	42.5	50.6	40.4	40.7	48.7	43.5	43.3
Prunes.....do	16.4	21.0	19.6	13.8	17.6	15.2	15.6	20.0	20.1	13.5	16.0	15.8	14.3	16.8	16.3
Raisins.....do	13.8	13.8	13.8	10.3	10.4	10.0	11.9	12.9	13.1	10.9	11.5	11.5	12.4	13.8	13.8
Bananas.....dozen	7.5	5.7	5.3	9.0	7.6	8.2	9.5	9.1	9.1	8.6	7.3	6.7	7.9	7.0	7.0
Oranges.....do	43.0	62.1	65.0	41.0	44.6	46.4	36.2	58.3	60.3	37.8	67.0	70.6	32.8	58.3	64.4

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

<sup>2</sup> Per pound.

<sup>3</sup> No. 2½ can

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound	Cts. 47.4	Cts. 43.9	Cts. 43.6	Cts. 44.9	Cts. 42.1	Cts. 41.4	Cts. 47.5	Cts. 46.4	Cts. 45.3	Cts. 53.6	Cts. 50.5	Cts. 50.9	Cts. 61.5	Cts. 60.9	Cts. 60.5
Round steak.....do.	43.3	40.2	39.8	40.4	38.5	38.4	44.4	43.1	43.1	50.2	48.8	48.3	52.6	52.0	51.0
Rib roast.....do.	34.2	32.7	32.3	35.9	33.9	33.4	35.0	35.3	35.3	40.7	38.8	38.8	41.9	40.7	40.5
Chuck roast.....do.	31.9	30.2	29.4	30.6	28.9	28.5	29.4	28.7	29.8	32.0	30.1	29.1	33.8	32.6	32.2
Plate beef.....do.	20.9	19.4	18.9	19.2	18.8	18.4	24.1	21.4	22.0	18.5	18.9	18.5	18.4	18.6	18.4
Pork chops.....do.	36.8	36.8	35.3	37.5	37.4	35.4	33.1	33.3	33.6	39.0	38.8	37.0	39.1	38.4	38.4
Bacon, sliced.....do.	43.4	44.0	43.8	45.6	45.7	44.6	39.0	36.2	37.6	42.6	42.8	43.0	44.7	44.6	44.0
Ham, sliced.....do.	48.9	49.2	48.9	53.1	52.7	51.8	51.1	51.5	51.0	56.1	53.8	53.5	61.1	59.4	59.4
Lamb, leg of.....do.	44.1	36.4	36.7	39.4	33.6	33.6	46.0	45.0	45.0	42.8	35.4	35.6	42.9	37.0	37.1
Hens.....do.	41.1	36.4	33.5	40.0	35.9	34.9	37.0	34.5	35.3	44.8	38.6	38.9	46.1	41.4	41.2
Salmon, red, canned.....pound	36.6	33.3	33.9	35.4	35.4	35.4	29.0	29.7	29.7	28.7	29.4	29.5	31.4	31.3	30.8
Milk, fresh.....quart	11.0	12.0	12.0	12.0	11.0	11.0	18.0	18.0	18.0	16.0	16.0	15.5	16.0	16.0	16.0
Milk, evaporated.....16-ounce can	11.0	10.2	10.1	11.5	10.5	10.5	10.6	9.9	9.8	10.5	9.9	9.9	11.6	10.3	10.3
Butter.....pound	50.6	45.8	43.0	51.0	45.0	42.4	56.3	47.7	47.2	56.1	47.9	46.3	55.9	48.8	48.0
Oleomargarine (all butter substitutes).....pound	26.8	25.4	25.9	25.3	25.3	25.0	29.1	25.4	24.9	29.7	30.0	29.5	29.0	26.3	26.3
Cheese.....do.	36.9	34.6	34.5	36.9	34.0	32.9	34.4	33.1	33.5	41.8	38.3	38.3	41.8	40.5	40.5
Lard.....do.	18.6	17.1	17.2	18.9	17.2	17.1	18.3	16.5	16.3	18.6	17.3	17.6	18.9	18.0	18.0
Vegetable lard substitute.....pound	26.5	26.3	26.3	26.6	26.4	26.3	19.6	19.1	18.7	25.3	25.1	25.0	26.1	25.5	25.6
Eggs, strictly fresh.....dozen	34.7	30.8	28.0	34.0	29.6	27.7	34.4	30.3	27.3	47.0	43.2	42.1	49.6	45.0	45.6
Bread.....pound	8.7	8.1	8.1	9.0	8.8	8.8	10.1	9.9	9.9	8.8	9.0	9.0	8.8	8.7	8.7
Flour.....do.	4.3	4.3	4.2	4.4	4.5	4.4	5.7	5.6	5.6	5.0	4.9	4.7	5.0	4.8	4.8
Corn meal.....do.	6.1	6.1	6.3	5.5	5.7	5.7	3.9	4.0	3.9	6.7	6.2	6.2	6.8	7.0	6.8
Rollod oats.....do.	8.2	7.9	8.0	7.9	7.9	7.8	8.1	7.9	7.9	8.7	8.6	8.6	9.4	9.0	8.8
Corn flakes.....8-ounce package	9.6	9.4	9.4	9.6	9.3	9.3	9.0	8.8	8.8	8.9	8.9	8.9	9.9	9.9	9.8
Wheat cereal.....28-ounce package	24.7	24.4	24.5	25.4	24.7	24.7	24.2	24.3	24.3	26.2	25.6	26.0	24.3	24.8	24.8
Macaroni.....pound	17.8	17.2	17.3	17.6	17.5	17.4	20.9	20.4	20.5	21.5	21.3	21.3	21.8	21.8	21.6
Rice.....do.	9.9	10.0	9.8	10.0	9.7	9.5	7.8	7.8	7.8	9.6	9.3	9.5	10.2	10.2	10.3
Beans, navy.....do.	14.3	11.2	11.1	14.4	11.7	11.5	14.1	12.1	12.1	14.8	12.4	12.0	14.0	11.6	11.5
Potatoes.....do.	1.5	3.8	4.2	1.5	3.3	3.7	3.2	4.7	4.2	3.1	4.2	4.8	2.4	3.6	3.8
Onions.....do.	7.4	4.8	6.0	8.4	5.5	6.3	5.9	4.5	4.9	7.3	7.0	6.5	8.3	6.4	7.0
Cabbage.....do.	5.2	9.7	7.9	5.1	11.0	7.9	3.4	8.7	4.9	4.8	9.5	7.8	6.3	10.5	8.7
Pork and beans.....No. 2 can	11.6	10.6	10.3	12.6	11.9	11.3	10.8	9.6	9.4	10.8	10.7	10.4	12.5	11.5	11.4
Corn, canned.....do.	16.0	15.4	15.5	15.3	13.6	13.5	14.4	14.0	14.0	16.5	15.1	15.1	18.5	18.2	18.3
Peas, canned.....do.	15.9	16.0	16.1	15.5	14.1	14.0	15.1	15.4	15.4	17.1	16.1	15.9	21.3	19.8	19.8
Tomatoes, canned.....No. 2 can	14.0	13.8	14.0	13.9	13.6	13.6	11.6	11.0	11.0	12.2	11.2	11.2	14.5	14.2	14.2
Sugar, granulated.....pound	6.1	6.3	6.2	6.5	6.3	6.0	6.4	6.2	6.2	6.2	5.8	6.0	6.4	6.2	6.2
Tea.....do.	69.0	67.7	67.7	68.4	69.8	69.4	79.7	79.1	79.1	57.8	58.2	58.2	59.9	60.2	61.5
Coffee.....do.	46.2	37.6	37.7	53.8	43.9	43.5	50.2	41.1	40.8	48.3	40.3	39.9	51.7	42.3	42.2
Prunes.....do.	14.7	18.3	17.2	14.7	19.2	17.5	12.6	18.0	18.6	14.3	17.1	17.1	14.4	17.2	15.8
Raisins.....do.	12.2	12.4	12.3	11.7	12.5	12.6	9.6	11.4	11.8	11.1	11.3	11.1	12.5	11.8	11.5
Bananas.....dozen	9.0	8.7	8.9	9.7	8.8	8.7	21.7	18.6	18.6	37.5	36.3	36.3	33.5	33.4	33.3
Oranges.....do.	43.1	62.5	69.0	39.2	61.7	64.2	36.1	57.0	51.4	48.0	61.2	68.6	45.9	63.0	78.5

\* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	1930			1930			1930			1930			1930		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	Cts. 45.8	Cts. 43.7	Cts. 42.9	Cts. 53.2	Cts. 50.8	Cts. 51.5	Cts. 47.5	Cts. 45.3	Cts. 44.3	Cts. 47.1	Cts. 43.9	Cts. 43.7	Cts. 43.3	Cts. 40.9	Cts. 39.8
Round steak.....do.....	40.9	38.4	38.4	50.9	48.9	48.7	41.5	39.8	39.3	45.3	43.4	42.4	41.6	40.2	39.7
Rib roast.....do.....	38.4	35.8	34.8	43.7	41.9	41.2	39.8	35.8	34.4	32.2	32.5	32.1	32.2	32.4	32.2
Chuck roast.....do.....	27.6	27.2	27.1	30.8	30.8	30.0	28.5	26.6	26.1	29.7	28.6	28.1	29.5	27.4	26.5
Plate beef.....do.....	22.6	21.6	21.4	24.8	25.3	24.6	21.9	21.3	20.9	19.3	18.6	18.2	19.7	20.0	19.8
Pork chops.....do.....	37.0	36.0	34.8	40.3	39.5	39.1	34.5	33.5	33.3	35.2	35.2	33.5	35.1	32.6	33.0
Bacon, sliced.....do.....	42.8	41.9	42.5	45.2	45.2	45.0	41.6	41.4	42.9	43.5	44.0	44.3	43.8	42.3	42.1
Ham, sliced.....do.....	53.0	50.7	50.7	58.2	55.8	55.6	45.0	44.9	45.6	53.4	51.0	51.0	50.8	50.0	50.0
Lamb, leg of.....do.....	40.4	36.0	36.5	40.8	33.7	34.5	42.5	38.6	38.3	39.5	34.2	33.9	46.9	36.3	36.9
Hams.....do.....	40.3	36.9	37.3	46.0	39.8	39.4	40.3	39.8	37.4	36.6	33.6	32.5	38.8	34.7	32.9
Salmon, red, canned.....pound..	35.1	36.4	36.3	30.7	30.5	30.5	32.3	33.6	32.9	34.3	33.9	34.1	33.3	33.0	33.2
Milk, fresh.....quart..	14.0	14.0	14.0	16.0	16.0	15.0	18.0	18.0	18.0	11.3	11.0	11.0	13.0	13.0	13.0
Milk, evaporated.....16-ounce can..	10.3	9.8	9.8	10.1	10.0	9.8	10.8	9.9	10.0	11.1	10.2	10.1	10.7	9.7	9.7
Butter.....pound..	56.2	49.6	48.5	54.0	47.7	44.9	59.1	50.1	49.9	50.0	41.0	41.8	49.8	44.3	41.7
Oleomargarine (all butter substitutes).....pound..	28.4	26.3	26.5	28.2	26.7	26.7	26.3	25.9	25.9	26.0	25.8	25.9	27.7	26.3	26.3
Cheese.....do.....	37.6	33.5	33.9	40.2	37.7	38.3	34.8	34.0	33.1	35.1	32.6	32.9	36.5	33.5	33.5
Lard.....do.....	18.4	17.2	17.2	19.6	17.3	17.3	18.2	16.3	16.1	19.6	17.6	17.5	18.7	16.6	16.6
Vegetable lard substitute.....pound..	20.0	20.2	19.9	25.7	25.2	25.3	21.7	21.4	21.8	25.4	26.5	26.5	27.6	27.0	27.0
Eggs, strictly fresh.....dozen..	36.4	34.1	30.7	47.9	43.4	43.7	39.5	33.0	33.4	32.2	28.6	27.1	33.5	28.1	26.5
Bread.....pound..	8.8	8.8	8.8	8.6	8.7	8.7	9.4	8.8	8.8	9.1	9.0	9.0	10.0	10.0	10.0
Flour.....do.....	6.6	6.4	6.3	5.0	4.6	4.6	5.2	5.1	4.9	4.1	4.2	4.1	4.6	4.6	4.5
Corn meal.....do.....	4.1	4.0	3.9	6.7	6.7	6.6	4.7	4.6	4.5	4.7	4.7	5.0	4.9	4.8	4.8
Roiled oats.....do.....	8.5	8.2	8.2	8.6	8.3	8.3	8.7	8.4	8.4	10.0	10.1	9.9	8.6	8.5	8.5
Corn flakes.....8-ounce package..	9.4	9.1	9.2	9.0	8.9	8.8	9.7	9.6	9.5	10.0	9.7	9.7	9.6	9.5	9.5
Wheat cereal.....28-ounce package..	25.2	24.5	24.5	24.4	23.7	23.7	24.9	24.9	24.4	27.3	26.8	27.1	25.7	25.5	25.5
Macaroni.....pound..	10.9	10.5	10.3	20.6	20.1	20.1	19.1	19.0	18.9	21.1	20.7	20.9	18.8	18.7	18.7
Rice.....do.....	8.6	8.6	8.3	9.6	9.1	9.2	10.7	10.1	10.0	10.1	10.1	10.4	9.3	9.1	9.1
Beans, navy.....do.....	13.7	11.2	10.9	15.0	14.1	13.7	14.3	11.2	10.7	13.6	11.0	10.6	14.2	10.6	10.4
Potatoes.....do.....	3.3	4.5	3.8	3.2	4.3	4.7	3.3	4.7	4.7	1.7	3.7	3.9	1.5	3.9	4.1
Onions.....do.....	4.8	4.5	4.2	7.3	5.8	6.0	8.2	5.6	6.0	8.0	6.0	6.9	8.5	7.0	7.9
Cabbage.....do.....	3.8	7.8	4.7	5.7	10.2	8.0	4.5	9.3	6.4	5.2	10.8	9.4	5.5	10.5	8.5
Pork and beans.....No. 2 can..	11.1	9.9	9.9	11.7	10.7	10.6	10.5	9.7	9.6	13.1	13.2	12.7	11.4	11.0	11.3
Corn, canned.....do.....	15.2	15.1	14.8	15.1	14.5	14.7	15.4	14.8	14.9	15.4	15.5	15.5	14.3	14.1	14.1
Peas, canned.....do.....	16.5	15.8	15.5	15.5	15.3	14.5	17.8	16.7	16.8	15.2	14.7	14.7	17.3	16.8	16.8
Tomatoes, canned.....No. 2 can..	12.7	11.3	11.1	12.7	11.7	11.8	12.0	10.0	9.9	14.7	14.3	14.1	13.5	13.5	13.5
Sugar, granulated.....pound..	5.9	5.8	5.8	5.6	5.5	5.7	6.3	6.3	6.1	6.5	6.6	6.7	7.2	7.2	7.0
Tea.....do.....	83.9	80.9	80.4	67.4	65.8	66.1	94.3	93.9	93.3	78.0	78.3	78.9	65.2	62.4	61.9
Coffee.....do.....	38.1	30.9	30.8	45.0	37.3	35.3	50.3	40.8	38.6	53.6	46.7	45.0	49.1	40.7	41.0
Prunes.....do.....	14.2	18.0	16.5	13.4	16.1	15.9	14.2	18.4	17.6	15.1	18.9	18.3	15.7	20.1	19.4
Raisins.....do.....	10.1	10.9	10.7	11.6	12.5	12.3	11.7	11.5	11.4	13.3	13.3	13.3	12.1	13.2	13.5
Bananas.....dozen..	16.0	15.7	17.0	37.9	35.0	34.7	32.3	30.6	29.2	29.4	29.0	29.2	28.9	28.1	27.9
Oranges.....do.....	47.3	69.0	72.2	53.0	67.1	72.2	43.8	50.3	72.4	37.9	61.1	67.4	36.7	59.0	61.9

¹Per pound.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.			Providence, R. I.		
	1930			1930			1930			1930			1930		
	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15	May 15, 1929	Apr. 15	May 15
Sirloin steak.....pound..	65.0	61.7	61.5	55.7	52.4	53.5	72.4	67.5	67.9	39.8	37.2	37.6	78.7	80.5	80.5
Round steak.....do.....	51.1	48.7	48.8	47.4	44.5	45.3	53.5	50.5	50.5	38.4	34.9	35.1	56.7	58.0	58.0
Rib roast.....do.....	42.0	40.7	40.8	40.8	39.2	38.7	37.5	35.5	35.9	32.3	30.9	31.5	43.9	44.1	45.0
Chuck roast.....do.....	34.8	31.8	30.7	34.2	31.3	30.7	28.7	27.1	27.2	28.3	25.7	25.6	34.4	37.1	36.5
Plate beef.....do.....	19.7	18.8	18.4	19.9	18.5	18.3	25.6	24.1	24.0	22.2	20.0	19.8	26.9	27.9	28.5
Pork chops.....do.....	42.6	40.3	38.8	39.9	38.5	37.4	38.4	39.5	36.6	36.9	36.1	36.1	41.8	41.3	40.7
Bacon, sliced.....do.....	42.4	42.5	42.6	47.9	45.1	45.9	39.2	38.1	38.1	50.9	49.8	48.8	41.3	39.6	39.9
Ham, sliced.....do.....	59.5	57.5	57.8	59.7	58.1	58.8	54.6	52.8	53.7	56.9	53.3	53.2	56.5	56.3	56.5
Lamb, leg of.....do.....	43.8	36.7	38.6	44.7	37.3	38.1	40.3	33.5	34.2	40.4	35.5	35.4	43.4	37.8	37.8
Hens.....do.....	46.9	40.5	40.2	50.6	44.5	44.2	44.9	41.3	41.2	37.1	37.0	36.8	47.3	41.4	40.2
Salmon, red, canned.....pound..	28.3	28.8	28.5	29.7	30.9	31.4	29.6	31.0	31.2	32.0	32.5	32.5	29.8	31.1	30.9
Milk, fresh.....quart..	13.0	13.0	13.0	14.0	13.0	13.0	15.0	14.0	14.0	12.0	12.0	12.0	15.7	15.5	15.5
Milk, evaporated.....16-ounce can..	10.9	10.5	10.5	10.5	10.1	10.2	11.7	11.5	11.5	10.1	10.1	10.1	11.5	11.0	10.8
Butter.....pound..	57.3	49.2	48.4	55.1	49.5	47.1	56.8	50.1	50.4	53.2	48.5	44.5	55.1	48.7	47.2
Oleomargarine (all butter substitutes).....pound..	28.5	27.2	27.2	28.0	26.9	26.6	27.1	24.7	25.3	26.2	26.0	24.8	26.6	24.6	24.4
Cheese.....do.....	42.6	41.9	42.0	42.0	38.4	38.6	38.9	36.7	35.8	38.4	35.5	34.9	38.6	36.6	36.5
Lard.....do.....	18.2	16.1	16.2	17.9	16.1	16.2	17.4	16.1	16.1	18.7	18.5	18.6	17.4	16.1	15.9
Vegetable lard substitute.....pound..	24.9	25.0	25.0	27.2	26.6	26.6	25.6	25.7	25.7	28.3	28.4	28.5	26.5	25.4	25.4
Eggs, strictly fresh.....dozen..	41.7	36.5	36.1	42.1	35.8	36.3	44.7	39.4	40.7	35.7	30.9	31.0	48.1	41.5	41.7
Bread.....pound..	8.3	8.3	8.2	8.9	8.8	8.8	9.0	9.0	9.0	9.3	9.2	9.2	9.0	8.7	8.7
Flour.....do.....	4.8	4.7	4.7	4.6	4.5	4.5	4.9	4.8	4.7	4.7	4.5	4.6	5.2	5.1	4.9
Corn meal.....do.....	5.1	5.8	5.7	6.1	6.4	6.5	5.3	5.1	5.2	5.8	5.7	5.9	5.0	5.2	5.0
Rolled oats.....do.....	8.2	8.3	8.6	9.2	8.9	9.0	7.6	7.2	7.3	10.4	9.8	9.9	9.0	9.0	9.0
Corn flakes.....8-ounce package..	8.7	8.5	8.7	9.6	9.4	9.5	9.6	9.7	9.7	9.6	9.5	9.4	9.7	9.4	9.2
Wheat cereal.....28-ounce package..	24.6	24.7	24.6	24.6	24.9	24.8	25.8	25.9	25.9	26.8	26.6	26.3	24.8	24.5	24.5
Macaroni.....pound..	20.4	20.3	20.8	22.6	22.1	22.5	23.5	22.5	22.5	18.3	17.1	17.0	22.8	22.9	22.9
Rice.....do.....	10.1	10.5	10.1	11.3	10.3	10.3	11.3	11.2	11.0	9.9	9.9	9.7	9.9	9.9	9.8
Beans, navy.....do.....	15.1	12.4	11.9	14.5	10.4	10.7	13.8	12.6	12.5	14.5	12.4	12.2	13.7	11.8	11.6
Potatoes.....do.....	3.7	4.4	4.9	3.2	3.7	3.9	2.4	3.5	3.3	2.3	4.1	4.7	2.1	3.6	3.7
Onions.....do.....	6.4	5.4	5.5	7.6	6.7	6.6	7.6	5.6	6.6	6.9	2.9	2.9	6.8	5.8	6.1
Cabbage.....do.....	4.7	9.6	6.3	5.4	10.7	8.3	5.6	11.6	8.1	6.9	11.7	6.6	4.7	11.1	7.0
Pork and beans.....No. 2 can..	11.2	10.3	10.4	13.0	11.8	11.8	15.7	16.0	16.0	13.3	12.6	12.0	11.4	10.8	10.8
Corn, canned.....do.....	15.2	14.4	14.4	15.9	15.2	15.4	14.5	14.2	14.3	17.7	17.1	16.7	16.8	16.6	17.1
Peas, canned.....do.....	15.5	15.3	15.0	16.9	16.1	15.7	17.7	17.0	17.0	17.1	16.6	16.5	18.0	17.7	17.9
Tomatoes, canned.....No. 2 can..	13.3	11.8	11.9	14.0	12.9	12.9	12.9	12.0	12.3	15.5	14.6	14.7	13.6	13.0	13.0
Sugar, granulated.....pound..	5.7	5.5	5.6	6.7	6.6	6.6	6.2	6.2	6.2	6.6	6.5	6.5	5.9	5.8	5.7
Tea.....do.....	69.2	73.9	73.8	83.3	82.1	81.1	61.5	62.7	63.7	77.8	79.4	82.1	69.8	60.1	59.0
Coffee.....do.....	44.0	35.5	35.1	49.5	41.5	41.2	52.6	45.3	44.6	53.1	46.3	45.1	52.2	42.2	40.1
Prunes.....do.....	12.8	15.6	15.6	14.0	19.1	17.9	13.5	17.2	15.3	14.5	12.1	11.1	13.8	16.1	16.0
Raisins.....do.....	10.6	11.4	11.2	11.5	12.2	12.4	10.8	11.5	11.4	11.2	10.7	10.8	11.6	12.1	12.2
Bananas.....dozen..	28.4	27.7	28.4	35.7	35.2	35.2	10.5	9.3	8.9	10.1	10.1	9.9	32.1	8.9	8.4
Oranges.....do.....	39.2	59.5	70.6	41.1	61.9	70.8	47.2	62.6	72.2	41.7	56.0	57.9	43.4	69.2	73.4

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most other cities included in this report it would be known as "porterhouse" steak.

<sup>2</sup> Per pound.

<sup>4</sup> No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.			St. Paul, Minn.			Salt Lake City, Utah		
	1929		May 15, 1930	1930		May 15, 1930	1929		May 15, 1930	1929		May 15, 1930	1929		May 15, 1930
	May 15, 1929	Apr. 15		May 15, 1929	Apr. 15		May 15, 1929	Apr. 15		May 15, 1929	Apr. 15		May 15, 1929	Apr. 15	
Sirloin steak—pound	Cts. 47.9	Cts. 48.1	Cts. 47.4	Cts. 47.5	Cts. 46.4	Cts. 47.7	Cts. 48.1	Cts. 45.6	Cts. 44.9	Cts. 44.2	Cts. 39.9	Cts. 39.5	Cts. 40.0	Cts. 38.1	Cts. 38.1
Round steak—do	43.2	43.6	43.0	41.6	41.2	41.8	47.1	44.4	42.9	39.1	35.9	35.8	38.5	37.8	37.7
Rib roast—do	37.3	35.5	35.7	35.8	34.8	34.6	37.7	36.5	35.7	33.1	32.7	33.0	33.0	32.5	32.1
Chuck roast—do	28.9	29.1	29.2	31.5	30.1	29.6	30.6	29.6	28.4	29.8	27.9	26.9	27.3	26.4	26.8
Plate beef—do	21.3	22.1	21.6	19.5	18.8	18.3	21.6	21.6	19.5	18.8	17.9	17.5	20.7	19.7	19.3
Pork chops—do	38.8	36.4	35.2	40.0	39.4	38.6	32.9	34.2	31.3	35.6	34.8	32.9	39.1	40.1	39.7
Bacon, sliced—do	39.7	38.1	37.9	36.9	37.0	36.9	42.4	41.0	40.6	43.3	41.7	40.6	44.5	44.1	44.1
Ham, sliced—do	45.6	43.5	43.7	53.6	52.7	53.0	53.9	53.2	52.8	50.0	48.8	48.4	57.3	57.3	56.9
Lamb, leg of—do	47.1	41.7	41.7	41.2	34.1	34.3	42.8	35.6	35.5	37.8	29.9	29.9	41.1	34.0	33.8
Hens—do	39.8	36.7	36.9	45.2	40.8	40.0	41.3	37.5	35.6	38.6	33.5	33.2	35.8	35.0	33.9
Salmon, red, canned—pound	31.3	32.3	31.9	31.4	30.4	30.5	31.4	32.5	32.7	35.8	35.5	35.4	33.6	32.9	32.7
Milk, fresh—quart	14.0	14.0	14.0	13.5	14.0	14.0	13.0	13.0	13.0	12.0	11.0	11.0	10.0	10.0	10.0
Milk, evaporated—16-ounce can	12.3	11.2	10.9	11.0	10.1	10.1	10.0	9.6	9.6	11.5	10.3	10.2	10.0	9.9	9.9
Butter—pound	61.0	51.3	49.5	55.8	47.2	45.5	55.4	49.9	47.9	48.8	44.4	42.5	49.7	43.9	42.3
Oleomargarine (all butter substitutes)—pound	30.0	30.1	30.1	28.1	26.8	26.2	26.3	24.8	24.3	24.0	23.7	23.0	25.2	26.9	27.0
Cheese—do	36.8	34.7	34.4	39.8	36.8	35.2	36.2	33.2	33.1	35.6	34.0	33.2	29.8	28.8	28.8
Lard—do	17.8	16.0	16.1	17.0	14.9	15.0	14.9	13.2	13.1	18.9	16.8	16.4	20.0	18.9	18.5
Vegetable lard substitute—pound	25.7	23.6	23.6	26.0	22.8	22.8	25.4	25.2	25.1	27.3	26.2	25.9	29.6	29.1	29.1
Eggs, strictly fresh—dozen	37.8	30.9	31.1	38.4	35.1	35.5	36.1	30.9	29.1	33.4	29.1	27.7	31.9	30.2	31.0
Bread—pound	8.9	8.6	8.6	8.6	8.4	8.4	9.3	8.9	8.9	9.3	9.3	9.3	9.7	9.5	9.5
Flour—do	5.0	4.9	4.9	4.9	4.7	4.5	4.7	4.7	4.7	4.5	4.6	4.5	3.6	3.6	3.6
Corn meal—do	4.9	4.7	4.7	5.7	5.8	5.8	4.3	4.8	4.7	5.3	5.4	5.4	5.9	6.2	6.4
Rolled oats—do	9.0	8.8	8.9	8.8	8.1	8.1	8.1	8.2	7.9	10.1	9.3	9.2	8.8	8.5	8.5
Corn flakes—8-ounce package	9.7	9.6	9.6	9.2	9.4	9.3	9.2	9.4	9.2	10.3	9.7	9.7	10.2	9.9	9.8
Wheat cereal—28-ounce package	26.1	25.7	25.4	25.6	24.2	24.0	24.2	24.4	24.4	26.2	25.9	26.2	25.5	25.4	25.4
Macaroni—pound	20.7	20.6	19.9	19.3	19.8	19.3	19.4	19.9	19.9	18.4	17.6	17.6	19.5	19.5	19.2
Rice—do	11.4	10.1	9.9	8.8	8.9	8.9	9.9	9.1	9.5	10.6	9.8	9.6	8.9	9.0	8.8
Beans, navy—do	14.5	11.8	12.0	14.4	10.8	10.4	14.2	10.9	10.4	14.6	12.0	11.8	12.5	9.8	9.9
Potatoes—do	3.6	4.5	4.9	2.6	3.3	3.5	3.8	4.7	4.7	1.2	3.2	3.6	1.6	3.0	3.2
Onions—do	9.0	5.6	6.9	6.4	4.7	6.4	6.9	6.0	5.8	7.9	5.3	6.8	7.7	2.9	3.9
Cabbage—do	4.8	10.3	6.4	6.2	9.6	8.2	4.9	9.5	7.0	5.3	10.1	8.7	5.2	10.8	8.1
Pork and beans—No. 2 can	11.0	10.0	9.8	10.8	10.2	10.2	10.6	10.1	10.1	13.8	12.8	11.8	12.6	12.7	12.5
Corn, canned—do	15.6	14.7	14.7	16.6	15.7	15.4	15.3	14.7	14.5	14.9	14.2	14.4	14.2	13.8	13.9
Peas, canned—do	17.6	17.5	17.3	16.8	15.5	15.5	15.3	14.8	14.9	14.9	14.5	14.5	14.9	14.6	14.7
Tomatoes, canned—No. 2 can	12.3	11.9	12.1	15.7	14.9	15.1	13.1	12.1	12.2	14.6	14.4	14.2	14.2	13.8	13.7
Sugar, granulated—pound	6.3	6.2	6.1	5.7	5.8	5.7	6.4	6.4	6.3	6.8	6.4	6.5	6.8	6.9	6.7
Tea—do	94.5	94.8	96.5	70.1	68.7	68.7	74.5	71.8	69.8	72.0	65.8	65.8	85.6	84.7	84.7
Coffee—do	48.3	41.2	39.2	47.2	35.6	37.2	46.6	37.9	38.3	52.5	46.4	44.8	55.0	49.4	48.5
Prunes—do	14.6	17.7	17.4	14.9	19.1	18.9	14.6	19.2	19.0	14.3	18.4	18.0	14.0	18.5	17.3
Raisins—do	11.0	12.6	12.4	11.6	12.1	11.9	11.0	11.9	11.6	13.6	13.0	13.1	11.5	11.7	11.5
Bananas—dozen	34.5	32.5	32.1	27.0	25.5	26.5	32.0	31.7	31.0	29.9	29.9	29.9	29.5	29.5	29.6
Oranges—do	40.9	58.0	56.9	45.4	60.3	73.1	41.3	61.4	61.4	42.2	62.7	70.3	37.4	65.1	64.5

\*Per pound.

\*No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	San Francisco, Calif.			Savannah, Ga.			Scranton, Pa.			Seattle, Wash.		
	May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930		May 15, 1929	1930	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	Cts. 41.0	Cts. 41.6	Cts. 41.8	Cts. 44.5	Cts. 41.4	Cts. 41.4	Cts. 60.7	Cts. 58.7	Cts. 58.3	Cts. 45.8	Cts. 43.3	Cts. 43.0
Round steak.....do.....	39.2	39.6	39.6	39.0	37.7	37.3	50.9	49.5	49.4	41.5	39.0	39.2
Rib roast.....do.....	36.6	36.8	35.3	34.7	33.6	33.6	42.4	40.1	40.5	36.3	34.4	34.1
Chuck roast.....do.....	25.8	26.0	25.3	27.2	25.6	26.1	35.0	34.4	34.3	29.2	26.9	27.3
Plate beef.....do.....	20.5	20.2	19.3	21.7	21.1	20.3	20.8	19.5	19.1	23.0	21.3	21.0
Pork chops.....do.....	42.1	41.0	40.5	31.3	31.4	31.8	40.8	40.5	39.5	40.1	39.1	39.0
Bacon, sliced.....do.....	55.3	55.1	55.1	37.9	37.3	36.7	46.9	45.8	45.6	54.7	53.9	51.4
Ham, sliced.....do.....	63.3	63.3	63.0	43.6	45.4	45.0	59.4	58.4	58.7	59.3	59.0	59.5
Lamb, leg of.....do.....	40.7	38.9	35.6	42.0	37.2	36.7	48.5	40.5	40.5	42.9	36.8	36.9
Hens.....do.....	44.8	43.5	42.4	36.9	33.5	31.4	47.6	42.8	42.7	38.0	36.4	36.4
Salmon, red, canned.....do.....	28.1	29.9	29.9	33.0	32.5	32.5	31.7	32.8	32.4	32.8	32.9	33.1
Milk, fresh.....quart.....	14.0	14.0	14.0	17.5	18.0	18.0	13.0	14.0	14.0	12.0	12.0	12.0
Milk, evaporated.....16-ounce can..	9.9	9.8	9.8	10.8	10.0	9.9	11.4	11.3	11.1	10.3	10.1	9.0
Butter.....pound.....	54.1	49.1	48.3	55.7	47.9	46.3	56.6	47.5	46.4	54.1	49.0	47.0
Oleomargarine (all butter substitutes).....pound.....	24.9	24.9	24.9	30.4	27.4	27.3	27.8	22.5	22.5	25.0	24.5	24.3
Cheese.....do.....	39.5	40.8	39.6	35.6	30.4	30.0	38.4	37.6	37.9	35.6	35.2	34.9
Lard.....do.....	22.3	20.8	20.8	18.0	16.7	16.5	19.5	18.1	17.3	20.0	19.1	18.9
Vegetable lard substitute.....do.....	27.8	28.2	28.1	17.2	16.6	16.6	26.6	26.8	26.7	26.5	25.9	26.6
Eggs, strictly fresh.....dozen.....	37.7	36.0	35.7	34.7	33.8	30.8	41.1	36.6	37.1	36.2	34.5	34.8
Bread.....pound.....	9.3	9.2	9.2	10.7	10.4	10.4	9.7	9.9	10.0	9.6	9.7	9.7
Flour.....do.....	5.1	5.1	5.1	6.3	6.0	5.8	5.4	5.4	5.4	4.7	4.5	4.5
Corn meal.....do.....	7.1	7.3	7.5	7.5	3.5	3.5	7.7	7.7	7.6	5.9	6.3	6.1
Rollod oats.....do.....	9.8	9.8	9.8	8.5	8.5	8.6	10.0	9.7	9.5	9.3	9.9	9.8
Corn flakes.....8-ounce package..	9.5	9.8	9.8	9.6	9.6	9.6	9.9	9.8	9.8	9.6	9.6	9.7
Wheat cereal.....28-ounce package..	25.4	25.3	25.2	24.0	24.9	24.9	25.1	25.8	25.8	26.8	26.3	26.3
Macaroni.....pound.....	16.4	17.1	16.9	17.9	17.9	17.4	23.1	22.6	22.6	17.8	17.6	17.6
Rice.....do.....	9.3	9.4	9.6	9.2	8.5	8.0	10.0	10.0	9.9	10.1	10.1	9.9
Beans, navy.....do.....	13.4	12.8	12.7	15.4	13.4	13.0	13.5	12.8	12.9	14.8	12.8	13.0
Potatoes.....do.....	3.0	4.9	4.9	3.0	4.2	4.4	3.0	3.7	4.1	2.2	4.1	4.5
Onions.....do.....	6.0	4.1	4.4	7.7	5.9	5.8	7.2	5.3	6.0	7.2	3.8	4.0
Cabbage.....do.....				3.4	6.7	5.1	5.2	10.5	8.0	7.2	11.2	7.7
Pork and beans.....No. 2 can..	12.9	12.1	11.9	10.8	10.0	10.0	12.2	11.8	11.6	12.9	11.9	11.3
Corn, canned.....do.....	17.4	17.4	17.4	15.0	14.8	14.8	16.9	16.6	16.6	17.7	17.3	17.1
Peas, canned.....do.....	18.0	17.5	17.5	16.7	17.2	17.0	17.4	17.3	17.3	18.1	17.6	17.2
Tomatoes, canned.....do.....	15.5	15.7	15.8	11.4	10.0	10.0	13.8	13.1	13.0	16.9	15.9	16.1
Sugar, granulated.....pound.....	6.1	6.2	6.1	6.1	5.8	5.8	6.3	6.5	6.3	6.2	6.4	6.3
Tea.....do.....	71.7	75.0	75.0	80.5	80.1	79.4	66.1	66.4	66.7	79.3	77.8	78.2
Coffee.....do.....	53.5	46.1	44.8	46.3	35.1	35.4	50.2	42.5	42.4	51.9	43.8	43.7
Prunes.....do.....	12.1	16.6	14.9	13.3	17.2	15.9	14.8	17.9	17.5	14.4	15.8	15.4
Raisins.....do.....	10.3	11.0	11.1	11.6	12.0	11.4	11.9	12.3	12.0	10.5	11.4	10.9
Bananas.....dozen.....	29.5	30.0	30.0	27.5	25.5	26.0	31.5	28.8	29.6	10.3	9.6	9.4
Oranges.....do.....	43.6	56.6	62.1	30.6	57.5	59.3	50.0	63.6	73.2	37.8	58.6	63.3

Per pound.

\* No. 2½ can.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD, BY CITIES—Continued

Article	Springfield, Ill.			Washington, D. C.			Hawaii			
							Honolulu		Other localities	
	May 15, 1929	1930		May 15, 1929	1930		1930			
		Apr. 15	May 15		Apr. 15	May 15	Apr. 15	May 15	Apr. 15	May 15
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....pound	43.6	41.3	42.5	56.1	52.3	52.4	38.4	38.4	32.8	32.8
Round steak.....do	43.6	41.7	42.5	51.1	46.3	45.9	32.7	33.2	30.8	30.8
Rib roast.....do	33.1	31.9	32.2	39.4	38.5	36.4	32.8	32.8	30.0	30.0
Chuck roast.....do	29.5	28.7	28.2	32.1	30.4	28.4	26.0	25.0	26.4	26.5
Plate beef.....do	21.5	21.5	20.1	19.7	17.7	16.9	23.8	23.8	23.3	23.3
Pork chops.....do	33.3	34.5	31.7	40.3	39.9	38.1	43.4	43.4	36.6	36.6
Bacon, sliced.....do	42.7	41.6	41.6	40.8	40.8	40.6	54.4	54.4	53.0	52.5
Ham, sliced.....do	50.5	50.5	50.0	59.1	57.5	57.4	64.6	64.6	58.3	58.3
Lamb, leg of.....do	45.4	35.7	34.3	45.7	36.0	37.0	40.4	39.8	48.3	48.3
Hens.....do	37.3	33.8	32.5	47.6	42.5	41.3	51.9	50.4	53.3	53.3
Salmon, red, canned.....do	33.8	33.6	33.9	29.1	31.0	30.1	29.7	30.0	31.3	31.3
Milk, fresh.....quart	14.4	14.4	14.4	14.8	15.0	15.0	20.3	20.3	15.0	15.0
Milk, evaporated.....16-ounce can	11.6	9.8	9.8	11.3	10.9	10.8	10.1	10.2	11.0	11.0
Butter.....pound	52.2	45.9	43.8	57.0	51.5	48.9	53.4	53.9	56.2	55.7
Oleomargarine (all butter substitutes).....do	28.2	27.2	27.0	26.8	25.4	25.7				
Cheese.....do	36.9	34.9	34.9	40.7	37.1	36.7	37.3	37.9	37.7	37.7
Lard.....do	18.2	15.6	15.5	17.0	15.9	15.5	24.4	24.4	23.9	27.5
Vegetable lard substitute.....do	27.4	26.7	26.5	24.4	24.6	24.5	26.8	26.8	26.6	26.2
Eggs, strictly fresh.....dozen	33.6	27.3	26.3	42.0	35.9	36.2	49.3	49.4	51.4	51.8
Bread.....pound	10.1	10.3	10.3	8.9	8.9	8.9	10.6	10.6	10.0	10.0
Flour.....do	4.7	4.5	4.4	5.3	5.1	5.1	5.7	5.8	5.1	5.1
Corn meal.....do	4.8	4.7	4.8	5.0	5.0	4.9	10.9	10.6	12.2	12.2
Rollod oats.....do	9.6	9.6	9.6	8.7	9.0	8.9	12.8	12.7	13.9	13.9
Corn flakes.....8-ounce package	9.5	9.4	9.4	9.2	9.1	9.1	12.8	12.9	13.8	13.8
Wheat cereal.....28-ounce package	27.3	26.7	26.9	24.2	24.1	24.0	27.3	27.1	29.1	29.1
Macaroni.....pound	18.5	18.6	18.5	21.9	21.4	21.5	19.1	19.1	20.6	20.6
Rice.....do	10.2	9.6	9.8	11.3	10.5	10.6	6.1	6.1	5.4	5.5
Beans, navy.....do	14.0	9.7	9.7	13.8	11.2	11.3	14.1	14.3	13.4	13.4
Potatoes.....do	2.1	4.2	4.3	3.0	4.3	4.7	4.5	4.9	4.3	4.5
Onions.....do	8.5	6.6	6.8	7.6	5.4	6.1	4.0	4.1	4.5	4.5
Cabbage.....do	5.5	11.2	7.7	5.0	9.7	5.9	6.3	7.0	4.5	4.5
Pork and beans.....No. 2 can	11.4	10.0	9.6	10.8	10.3	9.9	11.1	11.3	11.1	11.1
Corn, canned.....do	14.9	14.6	15.0	15.0	15.2	14.9	19.0	18.7	21.1	21.1
Peas, canned.....do	16.2	15.6	15.2	14.8	16.3	16.1	18.8	18.6	19.8	19.6
Tomatoes, canned.....do	14.4	13.7	13.7	12.2	11.1	11.0	14.7	14.7	18.6	18.1
Sugar, granulated.....pound	7.0	6.6	6.5	5.9	5.8	5.6	6.2	6.2	6.6	6.5
Tea.....do	83.8	81.5	81.5	89.2	88.5	90.2	86.1	85.1	84.7	85.6
Coffee.....do	51.7	44.7	44.8	46.9	38.2	36.9	40.9	36.3	45.3	44.4
Prunes.....do	14.9	19.1	18.9	14.5	19.6	17.9	18.1	17.2	18.1	18.1
Raisins.....do	11.6	12.8	12.8	12.8	12.6	12.6	12.7	12.4	14.5	14.7
Bananas.....dozen	9.0	8.0	7.7	29.1	27.0	27.5	4.4	4.7	10.0	10.0
Oranges.....do	41.4	66.9	77.1	40.2	54.6	73.0	58.5	59.4	59.6	62.5

\* Per pound.

## Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food <sup>3</sup> in May, 1930, compared with the average cost in the year 1913, in May, 1929, and April, 1930. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.<sup>4</sup>

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of May, 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 36 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Birmingham, Boston, Bridgeport, Butte, Charleston (S. C.), Chicago, Cincinnati, Cleveland, Dallas, Denver, Houston, Indianapolis, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Newark, New Orleans, New York, Norfolk, Omaha, Peoria, Pittsburgh, Portland (Me.), Richmond, Rochester, St. Louis, St. Paul, Savannah, Scranton, Springfield (Ill.), and Washington.

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD, IN MAY, 1930, COMPARED WITH THE COST IN APRIL, 1930, MAY, 1929, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age in- crease May, 1930, compared with 1913	Percentage decrease May, 1930, compared with—		City	Percent- age in- crease May, 1930, compared with 1913	Percentage decrease May, 1930, compared with—	
		May, 1929	April, 1930			May, 1929	April, 1930
Atlanta.....	47.6	6.4	1.6	Minneapolis.....	50.8	2.0	1.2
Baltimore.....	53.9	1.9	.5	Mobile.....		3.9	2.0
Birmingham.....	52.3	3.3	.9	Newark.....	45.0	2.0	.4
Boston.....	51.6	1.7	1.1	New Haven.....	50.5	1.7	*.1
Bridgeport.....		2.1	.5	New Orleans.....	47.1	4.6	2.8
Buffalo.....	54.0	1.5	.4	New York.....	51.2	2.8	1.2
Butte.....		.4	*.2	Norfolk.....		4.3	.9
Charleston, S. C.....	53.7	.9	.6	Omaha.....	46.4	*.7	.3
Chicago.....	62.8	1.1	1.0	Peoria.....		1.1	.5
Cincinnati.....	57.7	2.0	2.2	Philadelphia.....	52.2	2.7	*.1
Cleveland.....	46.8	2.7	.9	Pittsburgh.....	49.5	4.4	.2
Columbus.....		*.5	0	Portland, Me.....		3.1	.5
Dallas.....	48.2	3.7	1.1	Portland, Oreg.....	39.3	1.8	.6
Denver.....	35.9	1.6	*.2	Providence.....	50.8	1.5	1.0
Detroit.....	53.7	3.9	1.8	Richmond.....	55.6	4.2	.8
Fall River.....	46.1	1.9	.4	Rochester.....		2.7	*.3
Houston.....		4.4	2.7	St. Louis.....	54.8	3.7	2.2
Indianapolis.....	51.4	*.2	0	St. Paul.....		1.0	.5
Jacksonville.....	37.2	2.2	.7	Salt Lake City.....	31.3	.7	.5
Kansas City.....	50.3	*.3	.9	San Francisco.....	50.6	*.6	.7
Little Rock.....	44.7	3.2	1.0	Savannah.....		3.4	1.3
Los Angeles.....	38.2	3.7	1.4	Scranton.....	58.1	.9	*.3
Louisville.....	47.4	5.9	1.2	Seattle.....	46.8	.2	.4
Manchester.....	47.1	1.5	.4	Springfield, Ill.....		*.3	.9
Memphis.....	45.2	2.3	.9	Washington.....	55.9	3.3	.9
Milwaukee.....	55.4	*.1	.6				

\* Increase.

<sup>3</sup> For list of articles see note 1, p. 3.

<sup>4</sup> The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

Retail Prices of Coal in the United States<sup>1</sup>

THE following table shows the average retail prices of coal on May 15, 1929, and April 15 and May 15, 1930, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1929, AND APRIL 15 AND MAY 15, 1930

City, and kind of coal	1929	1930		City, and kind of coal	1929	1930	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
United States:				Cleveland, Ohio:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove—				Stove—	\$15.05	\$15.24	\$14.85
Average price—	\$14.74	\$15.32	\$14.65	Chestnut—	14.55	14.85	14.50
Index (1913=100)—	190.7	198.3	189.6	Bituminous—			
Chestnut—				Prepared sizes—			
Average price—	\$14.40	\$14.99	\$14.33	High volatile—	6.96	7.18	6.98
Index (1913=100)—	182.0	189.4	181.0	Low volatile—	9.00	10.03	9.08
Bituminous—				Columbus, Ohio:			
Average price—	\$8.52	\$8.84	\$8.53	Bituminous—			
Index (1913=100)—	156.8	162.7	157.0	Prepared sizes—			
Atlanta, Ga.:—				High volatile—	5.88	5.93	5.75
Bituminous, prepared sizes—	\$7.34	\$7.28	\$7.12	Low volatile—	7.25	8.25	7.19
Baltimore, Md.:—				Dallas, Tex.:—			
Pennsylvania anthracite—				Arkansas anthracite—Egg—	13.25	14.25	13.50
Stove—	13.50	14.25	13.50	Bituminous, prepared sizes—	11.83	11.92	11.00
Chestnut—	13.00	13.75	13.00	Denver, Colo.:—			
Bituminous, run of mine—				Colorado anthracite—			
High volatile—	7.75	7.89	7.75	Furnace, 1 and 2 mixed—	14.31	14.75	14.75
Birmingham, Ala.:—				Stove, 3 and 5 mixed—	13.26	14.75	14.75
Bituminous, prepared sizes—	6.93	7.11	6.89	Bituminous, prepared sizes—	9.20	10.41	9.43
Boston, Mass.:—				Detroit, Mich.:—			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove—	15.25	16.25	15.25	Stove—	15.50	16.00	15.50
Chestnut—	14.75	15.75	14.75	Chestnut—	15.00	15.50	15.00
Bridgeport, Conn.:—				Bituminous—			
Pennsylvania anthracite—				Prepared sizes—			
Stove—	14.50	15.25	14.50	High volatile—	8.30	8.05	8.05
Chestnut—	14.50	15.25	14.50	Low volatile—	9.61	9.46	9.46
Buffalo, N. Y.:—				Run of mine—			
Pennsylvania anthracite—				Low volatile—	7.88	7.67	7.67
Stove—	13.07	13.77	13.17	Fall River, Mass.:—			
Chestnut—	12.57	13.32	12.67	Pennsylvania anthracite—			
Butte, Mont.:—				Stove—	15.75	16.50	15.75
Bituminous, prepared sizes—	10.92	11.07	11.09	Chestnut—	15.50	16.25	15.50
Charleston, S. C.:—				Houston, Tex.:—			
Bituminous, prepared sizes—	9.67	9.67	9.67	Bituminous, prepared sizes—	12.00	12.00	11.60
Chicago, Ill.:—				Indianapolis, Ind.:—			
Pennsylvania anthracite—				Bituminous—			
Stove—	16.40	16.85	16.38	Prepared sizes—			
Chestnut—	15.95	16.40	15.93	High volatile—	6.01	5.94	5.89
Bituminous—				Low volatile—	7.93	8.44	7.88
Prepared sizes—				Run of mine—			
High volatile—	7.61	8.52	7.58	Low volatile—	6.63	6.96	6.80
Low volatile—	10.10	12.18	10.29	Jacksonville, Fla.:—			
Run of mine—				Bituminous, prepared sizes—	11.00	14.00	14.00
Low volatile—	7.50	8.25	7.75	Kansas City, Mo.:—			
Cincinnati, Ohio:—				Arkansas anthracite—			
Bituminous—				Furnace—	11.90	12.55	11.90
Prepared sizes—				Stove No. 4—	13.17	13.67	12.92
High volatile—	5.50	5.55	5.55	Bituminous, prepared sizes—	7.23	7.15	7.20
Low volatile—	7.23	7.53	7.53				

<sup>1</sup> Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.



## AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1929, AND APRIL 15 AND MAY 15, 1930—Continued

City, and kind of coal	1929	1930		City, and kind of coal	1929	1930	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
Little Rock, Ark.:				Portland, Me.:			
Arkansas anthracite—Egg—	\$13.50	\$13.50	\$12.50	Pennsylvania anthracite—			
Bituminous, prepared sizes—	10.05	9.75	9.45	Stove—	\$15.84	\$16.80	\$16.32
Los Angeles, Calif.:				Chestnut—	15.84	16.80	16.32
Bituminous, prepared sizes—	16.50	16.50	16.50	Portland, Oreg.:			
Louisville, Ky.:				Bituminous, prepared sizes—	13.04	13.26	13.12
Bituminous—				Providence, R. I.:			
Prepared sizes—				Pennsylvania anthracite—			
High volatile—	5.91	5.83	6.05	Stove—	\$15.25	\$16.00	\$15.25
Low volatile—	8.50	8.10	8.31	Chestnut—	\$15.25	\$16.00	\$15.25
Manchester, N. H.:				Richmond, Va.:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove—	16.00	17.00	16.00	Stove—	14.00	15.00	14.00
Chestnut—	16.00	17.00	16.00	Chestnut—	14.00	15.00	14.00
Memphis, Tenn.:				Bituminous—			
Bituminous, prepared sizes—	7.39	7.69	7.93	Prepared sizes—			
Milwaukee, Wis.:				High volatile—	7.88	8.38	7.75
Pennsylvania anthracite—				Low volatile—	8.53	9.09	7.86
Stove—	15.90	16.30	15.75	Run of mine—			
Chestnut—	15.45	15.85	15.30	Low volatile—	6.75	7.25	6.75
Bituminous—				Rochester, N. Y.:			
Prepared sizes—				Pennsylvania anthracite—			
High volatile—	7.68	7.68	7.68	Stove—	14.00	14.63	13.96
Low volatile—	10.24	10.99	10.08	Chestnut—	13.50	14.13	13.45
Minneapolis, Minn.:				St. Louis, Mo.:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove—	17.86	18.30	17.75	Stove—	16.20	16.70	16.25
Chestnut—	17.41	17.85	17.30	Chestnut—	16.00	16.45	16.00
Bituminous—				Bituminous, prepared sizes—	5.76	6.75	5.52
Prepared sizes—				St. Paul, Minn.:			
High volatile—	10.04	10.56	10.26	Pennsylvania anthracite—			
Low volatile—	12.75	12.39	13.14	Stove—	17.88	18.28	17.75
Mobile, Ala.:				Chestnut—	17.43	17.85	17.30
Bituminous, prepared sizes—	9.10	8.70	8.98	Bituminous—			
Newark, N. J.:				Prepared sizes—			
Pennsylvania anthracite—				High volatile—	9.65	10.27	10.08
Stove—	13.40	13.96	13.40	Low volatile—	12.75	12.63	13.15
Chestnut—	12.90	13.46	12.90	Salt Lake City, Utah.:			
New Haven, Conn.:				Colorado anthracite—			
Pennsylvania anthracite—				Furnace, 1 and 2 mixed—	18.00		
Stove—	14.50	15.17	14.40	Stove, 3 and 5 mixed—	18.00		
Chestnut—	14.50	15.17	14.40	Bituminous, prepared sizes—	6.96	8.38	8.38
New Orleans, La.:				San Francisco, Calif.:			
Bituminous, prepared sizes—	9.14	10.96	9.00	New Mexico anthracite—			
New York, N. Y.:				Cerillos egg—	25.00	26.00	25.00
Pennsylvania anthracite—				Colorado anthracite—			
Stove—	13.83	14.58	13.21	Egg—	24.50	25.50	24.50
Chestnut—	13.33	14.08	12.71	Bituminous, prepared sizes—	16.13	16.88	15.88
Norfolk, Va.:				Savannah, Ga.:			
Pennsylvania anthracite—				Bituminous, prepared sizes—	\$ 9.54	\$ 9.84	\$ 9.68
Stove—	14.00	14.00	13.75	Scranton, Pa.:			
Chestnut—	14.00	14.00	13.75	Pennsylvania anthracite—			
Bituminous—				Stove—	10.07	10.28	9.72
Prepared sizes—				Chestnut—	9.70	9.92	9.35
High volatile—	7.88	7.25	7.13	Seattle, Wash.:			
Low volatile—	9.00	8.50	8.00	Bituminous, prepared sizes—	10.36	10.75	10.75
Run of mine—				Springfield, Ill.:			
Low volatile—	7.00	6.50	6.50	Bituminous, prepared sizes—	4.34	4.34	4.34
Omaha, Nebr.:				Washington, D. C.:			
Bituminous, prepared sizes—	9.49	9.64	9.38	Pennsylvania anthracite—			
Peoria, Ill.:				Stove—	\$14.98	\$15.73	\$14.73
Bituminous, prepared sizes—	6.75	6.52	6.35	Chestnut—	\$14.48	\$15.23	\$14.23
Philadelphia, Pa.:				Bituminous—			
Pennsylvania anthracite—				Prepared sizes—			
Stove—	\$14.00	\$15.00	\$12.92	High volatile—	\$ 8.63	\$ 8.63	\$ 8.21
Chestnut—	\$13.50	\$14.50	\$12.44	Low volatile—	\$11.00	\$11.43	\$10.43
Pittsburgh, Pa.:				Run of mine—			
Pennsylvania anthracite—				Mixed—	\$ 7.63	\$ 7.75	\$ 7.78
Chestnut—	15.00	15.00	15.00				
Bituminous, prepared sizes—	5.25	5.29	5.20				

<sup>1</sup> Per ton of 2,240 pounds.<sup>2</sup> The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.<sup>3</sup> All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

### Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.

## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country.....	United States	Canada	Belgium	Czecho-slovakia	Den-mark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities.	51	60	59	Entire country	100	21	320	1	71
Commodities included.....	42 foods	29 foods	56 (foods, etc.)	29 foods	Foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base = 100.....	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914	October, 1913-July, 1914
<b>1924</b>									
January.....	146	145	480	836	194	1089	1401	376	127
April.....	138	137	498	829	-----	1035	1395	380	123
July.....	140	134	493	837	200	1052	1401	360	126
October.....	145	139	513	877	-----	1156	1428	383	134
<b>1925</b>									
January.....	151	145	521	899	215	1130	1442	408	137
April.....	148	142	506	901	-----	1137	1435	409	144
July.....	156	141	509	916	210	1145	1451	421	154
October.....	158	147	533	875	-----	1165	1471	433	151
<b>1926</b>									
January.....	161	157	527	854	177	1090	1503	480	143
April.....	159	153	529	832	-----	1085	1523	503	142
July.....	154	149	637	876	159	1105	1610	574	145
October.....	157	147	705	838	-----	1126	1647	624	145
<b>1927</b>									
January.....	156	153	755	914	156	1092	1586	592	151
April.....	150	146	774	923	152	1069	1572	580	150
July.....	150	147	790	962	153	1102	1553	557	157
October.....	153	148	804	907	152	1156	1526	520	152
<b>1928</b>									
January.....	152	151	813	913	152	1126	-----	530	152
February.....	148	149	811	910	-----	1112	522	522	151
March.....	148	147	806	901	-----	1123	-----	524	151
April.....	149	146	807	905	152	1119	-----	532	151
May.....	150	146	805	908	-----	1113	530	546	151
June.....	149	145	811	928	-----	1126	-----	557	152
July.....	150	146	811	943	153	1155	-----	1111	154
August.....	151	149	819	943	-----	1191	536	1110	156
September.....	154	150	825	928	-----	1174	-----	1111	153
October.....	153	152	834	907	146	1183	-----	1115	152
November.....	154	152	845	900	-----	1194	562	1119	152
December.....	152	152	852	905	-----	1186	-----	1121	153
<b>1929</b>									
January.....	151	152	856	900	147	1156	-----	1122	153
February.....	151	150	859	911	-----	1141	117	1122	156
March.....	150	151	862	913	-----	1135	-----	1123	159
April.....	148	148	860	901	150	1118	-----	1125	154
May.....	150	147	864	906	-----	1104	118	1127	154
June.....	151	147	867	907	-----	1103	-----	1127	154
July.....	155	148	874	925	149	1116	-----	1123	156
August.....	157	157	879	900	-----	1131	118	1123	155
September.....	157	157	889	886	-----	1128	-----	1122	154
October.....	157	157	894	879	146	1137	-----	1124	154
November.....	156	158	897	880	-----	1123	120	1125	153
December.....	155	159	897	880	-----	1090	-----	1125	152
<b>1930</b>									
January.....	152	160	895	872	145	1048	-----	1124	150
February.....	150	159	890	865	-----	1022	118	1121	148
March.....	147	157	879	853	-----	1006	-----	1120	145

<sup>1</sup> For succeeding month.<sup>2</sup> In gold.



## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

Country	Italy	Netherlands (The Hague)	Norway	Sweden	Switzerland	United Kingdom	South Africa	India (Bombay)	Australia	New Zealand
Number of localities	47	1	31	49	33	630	9	1	30	25
Commodities included	20 foods and charcoal	Foods	Foods	50 (43 foods, 7 fuel and light)	Foods	21 foods	24 foods	17 foods	46 foods and groceries	59 foods
Computing agency	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100	1913	1921	July, 1914	July, 1914	July, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1924										
January	527	82.5	230	163	173	175	120	154	155	150
April	527	81.7	240	159	169	167	122	143	150	150
July	538	80.8	248	159	170	162	117	151	148	148
October	556	82.3	264	172	174	172	120	156	146	145
1925										
January	609	80.2	277	170	172	178	120	151	148	147
April	606	86.7	276	170	169	170	124	153	152	149
July	605	81.3	260	169	169	167	120	152	156	151
October	645	79.3	228	166	168	172	119	148	157	155
1926										
January	658	76.6	216	162	165	171	116	151	155	154
April	633	80.1	198	158	161	159	119	150	163	151
July	645	73.5	198	156	159	161	117	155	159	149
October	662	75.7	191	157	160	163	120	153	153	147
1927										
January	629	76.3	180	156	158	167	116	155	158	148
April	606	77.0	169	151	156	155	119	151	151	145
July	540	76.5	175	151	157	159	119	154	152	144
October	530	79.5	173	155	159	161	119	148	159	143
1928										
January	531		170	153	159	162	119	151	154	147
February	529		170	153	158	159	118	146	152	145
March	522	81.6	171	154	157	155	118	142	153	145
April	522		171	154	156	155	119	140	154	144
May	529		172	155	156	154	120	144	154	146
June	533	79.4	171	157	156	156	118	142	154	147
July	516		173	157	157	157	116	143	152	147
August	520		170	156	156	156	115	142	150	147
September	526	76.2	164	155	157	156	115	141	150	147
October	536		163	153	158	157	115	142	150	149
November	555		161	152	158	159	115	144	150	150
December	564	75.5	161	151	158	160	115	145	152	152
1929										
January	565		158	150	157	159	115	146	161	140
February	565		157	151	157	156	115	146	161	148
March	571	76.0	158	152	156	157	117	146	160	146
April	566		156	150	154	150	118	145	162	147
May	563		156	149	154	149	119	143	160	148
June	564	72.3	156	149	155	147	118	144	161	147
July	558		157	151	155	149	116	145	160	146
August	553		161	151	156	153	115	146	161	146
September	547	74.5	160	151	158	154	114	146	162	147
October	546		160	150	158	156	113	147	165	147
November	551		159	148	157	159	112	147	164	147
December	554	73.1	157	147	157	159	112	148	155	147
1930										
January	548		156	145	155	157	112	145	153	146
February			154	144	154	154	111	143	151	145
March		69.7	152	142	153	150	111	139	151	144

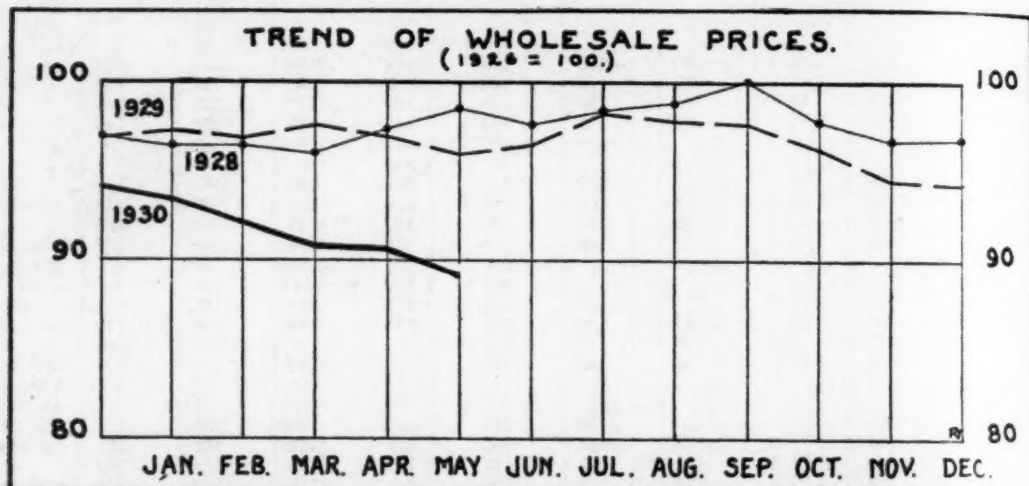
\* Second month following.

### Index Numbers of Wholesale Prices in May, 1930

**A** PRONOUNCED drop in the general level of wholesale prices from April to May is shown by information collected in leading markets of the country by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, based on average prices in 1926 as 100.0, stands at 89.1 for May, compared with 90.7 for April, a decrease of 1½ per cent. Compared with May, 1929, with an index number of 95.8, a decrease of 7 per cent is shown. Based on these figures the purchasing power of the 1926 dollar was \$1.044 in May, 1929, and \$1.122 in May, 1930.

Farm products as a whole decreased nearly 3 per cent in average price from April to May, due to declines in grains, beef steers, sheep, poultry, eggs, flaxseed, potatoes, and wool. Alfalfa and timothy hay, lemons, onions, and oranges, on the other hand, were somewhat higher than in April. Prices for the month averaged 9 per cent below those of May, 1929.

Foods declined 2½ per cent from the April level, with decreases for butter, coffee, flour, corn meal, and sugar. For this group, also,



prices were appreciably lower than in the corresponding month of last year.

Prices of hides and leather products were practically unchanged from those of the month before, with hides and skins slightly higher and leather slightly lower. Shoes and other leather goods showed no changes of consequence.

Textile products were slightly downward, with cotton goods, silk and rayon, woolen and worsted goods, and other textile products all participating in the decline.

Fuel and lighting materials showed only a minor change, decreases in anthracite coal being offset by increases in gasoline and other petroleum products.

Metals and metal products averaged somewhat lower, with minor decreases shown for iron and steel and decided decreases for nonferrous metals, including copper, silver, tin, and zinc.

Building materials also averaged lower than in April, lumber, brick, paint materials, and others sharing in the price decline.

Chemicals and drugs, including fertilizer materials and mixed fertilizers, were lower than in April, while house-furnishing goods

showed no change. In the group of miscellaneous commodities, prices of cattle feed were considerably lower, while paper and pulp and rubber also showed declines.

Decreases from April levels were shown for the three large groups of raw materials, semimanufactured articles, and finished products, while nonagricultural commodities and the group of all commodities other than farm products and foods also declined.

Of the 550 commodities or price series for which comparable information for April and May was collected, increases were shown in 55 instances and decreases in 214 instances. In 281 instances no change in price was reported.

Comparing prices in May with those of a year ago, as measured by changes in the index numbers, it is seen that decreases have taken place in all major groups of commodities, such decreases ranging from one-half of 1 per cent in the case of house-furnishing goods to over 10 per cent in the case of textile products.



INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF  
 COMMODITIES (1926=100.0)

	May, 1929	April, 1930	May, 1930	Purchasing power of the dollar May, 1930
All commodities.....	95.8	90.7	89.1	\$1.123
Farm products.....	102.2	95.8	93.0	1.075
Grains.....	88.2	84.1	82.1	1.218
Livestock and poultry.....	110.0	96.9	93.2	1.073
Other farm products.....	101.7	99.0	96.5	1.030
Foods.....	97.7	94.6	92.0	1.067
Butter, cheese, and milk.....	104.3	99.3	92.5	1.061
Meats.....	111.5	103.2	101.3	1.067
Other foods.....	86.6	87.7	86.3	1.130
Hides and leather products.....	106.8	102.7	102.6	1.073
Hides and skins.....	104.7	95.8	96.8	1.053
Leather.....	110.7	105.3	104.2	1.060
Boots and shoes.....	106.2	103.8	103.7	1.060
Other leather products.....	104.9	105.3	105.3	1.132
Textile products.....	94.2	85.5	84.6	1.103
Cotton goods.....	99.7	91.4	90.7	1.422
Silk and rayon.....	80.9	72.0	70.3	1.125
Woolen and worsted goods.....	98.7	89.6	88.9	1.387
Other textile products.....	81.1	72.3	72.1	1.282
Fuel and lighting materials.....	81.1	77.9	78.0	1.151
Anthracite coal.....	87.4	90.2	86.9	1.131
Bituminous coal.....	89.2	88.4	88.4	1.190
Coke.....	84.7	84.2	84.0	1.504
Gas.....	93.4	94.9	(1)	1.033
Petroleum products.....	72.5	65.6	66.5	1.076
Metals and metal products.....	105.2	98.8	96.8	1.076
Iron and steel.....	98.4	93.8	92.9	1.241
Nonferrous metals.....	104.9	90.5	80.6	1.063
Agricultural implements.....	98.3	95.0	95.0	1.068
Automobiles.....	112.2	106.8	106.8	1.016
Other metal products.....	98.5	98.4	98.4	1.076
Building materials.....	96.8	94.7	92.9	1.115
Lumber.....	94.6	91.8	89.7	1.157
Brick.....	92.4	88.4	86.4	1.079
Cement.....	94.6	92.7	92.7	1.068
Structural steel.....	99.6	91.9	91.9	1.122
Paint materials.....	85.7	91.4	89.1	1.049
Other building materials.....	106.3	104.0	101.8	1.475
Chemicals and drugs.....	94.2	91.0	89.9	1.156
Chemicals.....	99.4	96.6	95.3	1.068
Drugs and pharmaceuticals.....	70.5	68.0	67.8	1.040
Fertilizer materials.....	94.1	88.1	86.5	1.035
Mixed fertilizers.....	96.7	94.4	93.6	1.044
House furnishing goods.....	96.7	96.2	96.2	1.290
Furniture.....	95.0	96.6	96.6	1.907
Furnishings.....	97.8	95.8	95.8	1.168
Miscellaneous.....	79.6	78.5	77.5	3.425
Cattle feed.....	101.6	117.1	110.3	1.835
Paper and pulp.....	88.3	86.0	85.6	1.139
Rubber.....	44.9	30.9	29.2	1.196
Automobile tires.....	55.3	54.7	54.5	1.099
Other miscellaneous.....	106.6	108.3	107.9	1.135
Raw materials.....	95.3	89.8	87.8	1.143
Semimanufactured articles.....	95.1	87.9	83.6	
Finished products.....	96.4	91.9	91.0	
Nonagricultural commodities.....	94.1	89.4	88.1	
All commodities, less farm products and foods.....	92.5	88.3	87.5	

<sup>1</sup> Data not yet available.

## English Plan to Regulate Prices

IN 1925 the British Government established a food council to investigate and report upon the supply and prices of food in general, the idea being that by this means food prices could be kept down to what, in the light of the council's investigations, might be considered a reasonable figure. (See *Labor Review*, September, 1925, p. 208.) There has been much complaint because the council had no power to enforce its findings, and this has been increased by the recent failure of dealers to heed its recommendations in regard to two important food supplies. To remedy the difficulty, the Government has brought in a bill substituting for the food council a consumers' council with much wider powers, giving it authority to summon witnesses and compel information, and to make recommendations for reasonable prices, which may then be made mandatory, with penalties for non-observance. The provisions of the new bill were given in the May 2, 1930, issue of the *Manchester Guardian*.

The proposed council would consist of seven members, of whom at least two would be women. Their duties would be to make investigations into the production, distribution, supply, or price of any commodity which might be referred to them by the Board of Trade, or which might appear to them, either from complaints coming to them or from their own knowledge, to require investigation; to report to the board the results of their investigations and to make such recommendations as they might think fit. They would have power to compel the attendance of witnesses, to examine them under oath, and to enforce the production of such books, accounts, or other documents as they may consider necessary. They would concern themselves with articles of food of general consumption, articles of wearing apparel, clothing materials, fuels, and such other articles of common use as Parliament might approve.

After investigation the council would recommend what it considered a reasonable price for any commodity it had investigated. If, upon being formally notified of this price and being requested to adopt it, the parties concerned refused to do so, the Board of Trade would have power to enforce it by penalties of fine, and, in the case of second and third offenses, of imprisonment. Proceedings against offending traders might be undertaken by local authorities, by the Board of Trade, or by private persons.

# IMMIGRATION AND EMIGRATION

## Statistics of Immigration for April, 1930

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

**A** TOTAL of 40,924 aliens was admitted to the United States in April, 1930; the immigrant class, newcomers for permanent residence in this country, numbered 22,261; the remaining 18,663 were non-immigrants either coming here for a stay of less than a year or returning from a temporary visit in some foreign country. During the same month 18,864 aliens left the United States, 14,917 of whom were of the visiting class, either leaving after a short stay of less than a year in this country or going abroad for a visit with the intention of returning within a year to resume their permanent residence in this country. American citizens returning to and departing from the United States in April totaled 32,115 and 26,707, respectively. Compared with the previous month there was an increase in both the inward and outward movement of aliens, but a decrease in the movement of citizens.

Great Britain led the list of European countries contributing immigrants in April, 1930, sending 3,792, over three-fifths of whom came from Scotland. Germany was second in the list with 2,363, followed closely by the Irish Free State with 2,275 while Italy sent 1,818, Northern Ireland 908, Poland 822, and Scandinavia (Denmark, Norway, and Sweden) 786. These countries sent 12,764 immigrants this month, or 84.1 per cent of the total for Europe. Immigrants coming from Canada during April numbered 4,857; from Mexico, 684; from the West Indies, 399; from Central America, 101; 320 from South America; and 157 from Newfoundland. Only 388 came from Asia this month, 106 giving China as their last permanent residence, 83 Japan, 81 Palestine, 29 Syria, and 89 Armenia, Iraq, and other Asia.

The present-day immigrants are about equally divided as to sex, 2 out of every 3 are single, and about 2 out of every 5 are children under 21 years of age. Of the 22,261 immigrants admitted in April last, 11,262 were males and 10,999 females; 14,819 were single, 6,838 married, 552 widowed, and 52 divorced. As to the age given at time of arrival in this country, 3,331 were children under 16 years and 5,726 were from 16 to 21 years of age, while 6,768 ranged in age from 22 to 29 years, 2,935 from 30 to 37 years, 1,544 from 38 to 44 years, and 1,957 from 45 to 60 years and over.

The vast majority of the arriving immigrants were bound for certain large centers of population, 8,348, or over 37 per cent of the entire number for April, claiming New York as their destination; 1,688, or over 7 per cent, were going to Michigan; 1,676, or over 7 per cent, to New Jersey; 1,549, or 7 per cent, to Massachusetts; and 1,540, or 7 per cent, to Pennsylvania. The North Atlantic and North Central States together received 18,987 immigrants this month, or 85 per cent of the entire immigration, the North Atlantic States getting 64 per cent and the North Central States 21 per cent. The entire South received but 745 or 3 per cent of the total immigration, 318 going to



the South Atlantic States and 427 to the South Central States. The Western States received 2,484 immigrants, or 11 per cent, over one-half of whom settled in California. During the same month, 45 immigrants gave Alaska, Hawaii, and other outlying possessions, as their intended future permanent residence.

Of the total immigrants admitted during April last, 162 (38 males and 124 females) could neither read nor write, all being 16 years of age and over.

With respect to the 3,947 emigrant aliens leaving during April to again make their homes in some foreign country, 2,720 were males and 1,227 females; 517 were under 21 years of age, 2,420 were from 22 to 44 years, and 1,010 were 45 years of age and over; 1,825 were single, 1,993 married, and 129 widowed or divorced. Many of these emigrants were recent arrivals in the United States, 2,448 had lived here from 1 to 5 years, while 846 had resided here from 5 to 10 years, 188 from 10 to 15 years, 202 from 15 to 20 years, 114 from 20 to 25 years, and 149 over 25 years.

In April last, 757 aliens were debarred from entering the United States, 629 having been rejected at points along the Canadian and Mexican boundaries, and 128 at the seaports of entry. The principal cause for debarment was failure to present proper immigration visas as required by the act of 1924, 710 having been refused admission for this reason.

Deportation of aliens reached a high-water mark for this year, 1,850 undesirable aliens having been deported in April, 1930, making a total of 14,034 for the ten months (July to April) of the current fiscal year, as compared with 10,325 for the corresponding period of last year, an increase of 3,709, or 35.9 per cent. The 14,034 deportations so far this year exceeded the total number of aliens deported during any entire previous fiscal year, or during any decade prior to 1911. The annual number for the 10 years from 1901 to 1910 was 1,156, but the yearly total deportees did not reach the thousand mark until 1908. Beginning with 1926, the deportations each year ran over 10,000.

Of the 14,034 aliens deported during the first 10 months of the present fiscal year, 7,167 were sent to Mexico, practically all being Mexicans; 2,234 to Canada; 3,814 to European countries, principally Great Britain, Germany, Italy, Poland, and Spain, in the order mentioned; 214 went to China, 83 to Japan, and 81 to other Asia; 32 to Africa; 38 to Australia and New Zealand; 49 to Cuba and 86 to the other West Indies; and 236 to Central and South America and other countries. Entering the country without proper immigration visa was the principal cause for these deportations, 5,591 having been deported for this cause; while 2,064 were of the criminal and immoral classes; 1,675 were deported for remaining in this country longer than the period for which admitted; 538 had become public charges in hospitals and other institutions from causes, chiefly insanity, existing prior to entry into this country; 341 were mentally or physically defective at time of entry; 490 reentered the country after having been deported; and 3,335 were deported for failure to maintain student status, violation of contract labor law, and other miscellaneous causes.

The bulk of these deportees entered the country during recent years without proper inspection (surreptitious entries), coming in over the international land boundaries. Of the 14,034 deportees

for the said 10 months, 10,916, or 77.8 per cent, entered via the borders, 3,576 from Canada and 7,340 from Mexico. Of the remaining 3,118 who landed at our seaports mainly as seamen, 1,439 came in at New York and 717 at other Atlantic ports, 422 at Gulf of Mexico ports, and 540 at Pacific ports.

The outward movement of tourists and other visitors to foreign countries during the first four months of the present calendar year runs higher than for the corresponding months of last year. The number of American citizens leaving the United States via the seaports in January, 1930, was 31,279, in February 33,087, in March 36,936, and in April last 24,798. In January, 1929, 27,249 citizens departed from our seaports, in February 31,133, in March 26,429, and in April a year ago 23,523. The 36,936 citizens for March last included 13,608 departures from Miami and 4,208 from Key West, Fla., over three-fourths of whom left for a visit in Cuba.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1929, TO APRIL 30, 1930

Period	Inward					Aliens de- barred from enter- ing <sup>1</sup>	Outward					Aliens de- ported after land- ing <sup>2</sup>
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens de- parted	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant	Non- emi- grant	Total			
1929												
July.....	20,068	15,749	35,817	37,636	73,453	847	5,086	23,084	28,170	56,339	84,509	1,261
August.....	22,778	19,007	41,785	70,783	112,568	802	5,571	23,723	29,294	70,551	99,845	1,411
September.....	28,020	28,517	56,537	85,946	142,483	719	5,150	21,398	26,548	49,429	75,977	1,206
October.....	26,740	26,072	52,812	47,757	100,569	659	4,907	19,597	24,504	39,767	64,271	1,600
November.....	21,522	14,798	36,320	25,129	61,449	591	3,053	13,345	16,398	20,413	36,811	1,286
December.....	17,842	11,477	29,319	21,177	50,496	571	4,880	18,746	23,626	27,404	51,030	1,546
1930												
January.....	14,767	11,142	25,909	23,985	49,894	630	3,947	20,860	24,807	31,991	56,798	1,275
February.....	13,585	10,706	24,291	34,234	58,525	514	3,180	14,677	17,857	33,796	51,653	1,089
March.....	19,759	15,098	34,857	40,727	75,584	649	2,900	12,759	15,659	37,930	53,589	1,511
April.....	22,261	18,663	40,924	32,115	73,039	757	3,947	14,917	18,864	26,707	45,571	1,850
Total.....	207,342	171,229	378,571	419,489	798,060	6,739	42,621	183,106	225,727	394,327	620,054	14,034

<sup>1</sup> These aliens are not included among arrivals, as they were not permitted to enter the United States.

<sup>2</sup> These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

### Immigration to Canada, 1929-30

OF THE 163,288 immigrants to Canada in the fiscal year ending March 31, 1930, 64,082 were British, 30,727 were from the United States, and 68,479 from other countries. Compared with the record of the preceding year these figures show a decrease of 4,434 in the total number of immigrants, an increase of 5,202 in the number of British and of 167 in the number from the United States and a decrease of 9,803 from other countries. During the fiscal year 1929-30 the number of Canadians who returned from the United States was 29,830, or 3,968 <sup>1</sup> less than in the preceding 12 months.

The above information and the following table are taken from the Canadian Labor Gazette of May, 1930: <sup>2</sup>

<sup>1</sup> Monthly Labor Review, Washington, July, 1929, p. 236.

<sup>2</sup> With one exception noted above.

## IMMIGRATION TO CANADA, YEAR ENDING MARCH 31, 1930, BY SEX, OCCUPATION, AND DESTINATION

Sex, occupation, and destination	Via ocean ports	From the United States	Total	Sex, occupation, and destination	Via ocean ports	From the United States	Total
<i>Sex</i>				<i>Occupation—Contd.</i>			
Adult males.....	59,420	14,642	74,062	Female domestic servants.....	18,114	634	18,748
Adult females.....	41,261	8,047	49,308	Other classes:			
Children under 18.....	31,880	8,038	39,918	Males.....	1,585	1,497	3,082
Total.....	132,561	30,727	163,288	Females.....	12,274	4,016	16,290
				Children.....	12,955	4,874	17,829
<i>Occupation</i>				<i>Destination</i>			
Farming class:				Nova Scotia.....	2,043	303	2,346
Males.....	41,361	4,368	45,729	New Brunswick.....	1,629	849	2,478
Females.....	6,264	1,151	7,415	Prince Edward Island.....	64	62	126
Children.....	14,257	1,650	15,907	Quebec.....	18,808	5,109	23,917
Laboring class:				Ontario.....	46,933	13,041	59,974
Males.....	6,617	2,270	8,887	Manitoba.....	38,045	1,067	39,132
Females.....	1,213	357	1,570	Saskatchewan.....	8,347	2,656	11,003
Children.....	2,244	346	2,590	Alberta.....	10,193	4,777	14,970
Mechanics:				British Columbia.....	6,482	2,770	9,252
Males.....	6,259	3,979	10,238	Yukon Territory.....	16	65	81
Females.....	1,888	901	2,789	Northwest Territories.....	1	7	8
Children.....	1,542	637	2,179	Not given.....		1	1
Trading class:							
Males.....	3,085	2,373	5,458				
Females.....	1,414	968	2,382				
Children.....	745	520	1,265				
Mining class:							
Males.....	513	155	668				
Females.....	94	20	114				
Children.....	137	11	148				



# DIRECTORIES

## Labor Offices in United States and in Foreign Countries

(Bureaus of Labor, employment offices, industrial commissions, State workmen's compensation insurance funds, workmen's compensation commissions, minimum wage boards, factory inspection bureaus, and arbitration and conciliation boards.)

### United States

#### Department of Labor:

Hon. James J. Davis, Secretary.

Hon. Robt Carl White, Assistant Secretary.

Hon. W. W. Husband, Second Assistant Secretary.

Bureau of Labor Statistics—Ethelbert Stewart, commissioner.

Bureau of Immigration—Harry E. Hull, commissioner general.

Bureau of Naturalization—Raymond F. Crist, commissioner.

Children's Bureau—Miss Grace Abbott, chief. Address: Twentieth and D Streets, NW., Washington, D. C.

Employment Service—Francis I. Jones, director general. Address: 1800 D Street, NW, Washington, D. C.

Conciliation Service—Hugh L. Kerwin, director.

Women's Bureau—Miss Mary Anderson, director. Address: Twentieth and D Streets, NW, Washington, D. C.

United States Housing Corporation—Lulah T. Andrews, president. Address: 200 New Jersey Avenue, NW., Washington, D. C.

Address of all bureaus, except where otherwise noted: 1712 G Street, NW., Washington, D. C.

#### United States Employees' Compensation Commission:

Mrs. Bessie P. Brueggeman, chairman.

Harry Bassett, commissioner.

John M. Morin, commissioner.

Address of commission: Investment Building, Washington, D. C.

#### Board of Mediation:

Samuel E. Winslow, chairman.

G. Wallace W. Hanger.

Edwin P. Morrow.

Oscar B. Colquitt.

John Williams.

George A. Cook, secretary.

Address of board: Earle Building, Washington, D. C.

### Alabama

Child welfare commission: Bibb Graves, ex officio chairman, governor.

Child welfare department—Mrs. A. M. Tunstall, director and State child labor inspector.

Address of commission: Montgomery.

Workmen's compensation division (under bureau of insurance):

George H. Thigpen, commissioner, ex officio superintendent of insurance.

R. P. Coleman, deputy superintendent of insurance.

Roy M. Thigpen, workmen's compensation clerk.

Address of division: Montgomery.

Board of coal-mine inspectors: W. B. Hillhouse, chief inspector, Birmingham.

### Alaska

Federal mine inspector: B. D. Stewart, supervising mining engineer, United States Geological Survey, Juneau.

## Arizona

### Industrial commission:

R. B. Sims, chairman.  
Burt H. Clingan.  
W. E. Hunter.  
Harry R. Tritle, secretary.  
John J. Taheny, attorney.  
Wm. M. Brawner, industrial agent.  
A. C. Kingsley, medical examiner.  
Address of commission: Phoenix.

State inspector of mines: Tom C. Foster, Phoenix.

United States Employment Service: R. E. Crouse, superintendent, 16 South Second Avenue, Phoenix.

## Arkansas

### Bureau of labor and statistics:

W. A. Rooksbery, commissioner.  
E. I. McKinley, deputy commissioner and supervisor of statistical division.  
J. D. Newcomb, jr., chief boiler inspector.

### Industrial welfare commission—

W. A. Rooksbery, ex officio member and chairman.  
Mrs. Frank Gibb, secretary.  
Claude M. Burrow.  
Mrs. C. H. Hatfield.  
Elmer Grant.

Address of bureau: State Capitol, Little Rock.

Mine inspection department—Claude Speegle, State mine inspector, Fort Smith, Ark.

United States Employment Service: W. A. Rooksbery, Federal director for State, Room 326, State Capitol, Little Rock.

## California

Department of industrial relations: Will J. French, director.

### Division of industrial accidents and safety—

Will J. French, chairman of industrial accident commission.  
Meyer Lissner, member of industrial accident commission.  
Delger Trowbridge, member of industrial accident commission.  
C. H. Fry, superintendent of safety.  
H. L. White, secretary.  
M. R. Gibbons, medical director.  
Edward O. Allen, attorney.

State compensation insurance fund—Frank J. Creede, manager.

### Division of housing and sanitation—

Most Rev. E. J. Hanna, D. D., president.  
Charles C. Chapman.  
R. W. Kearney, chief of division.

Division of State employment agencies—Seth R. Brown, chief, Los Angeles.

Division of labor statistics and law enforcement—Walter G. Mathewson, chief.

### Division of industrial welfare—

A. B. C. Dohrmann, chairman.  
Mrs. Katherine Philips Edson, chief.  
Mrs. Parker S. Maddux.  
William R. Kilgore.  
George Durand.

Division of industrial fire safety—Jay W. Stevens, chief.

Address of department: State Building, San Francisco.

United States Employment Service: Seth R. Brown, Federal director, 465 Subway Terminal Building, Los Angeles.

## Colorado

### Bureau of labor statistics:

Charles M. Armstrong, secretary of State and ex officio labor commissioner.

M. H. Alexander, deputy labor commissioner and chief factory inspector.

Address of bureau: Denver.

**Industrial commission:**

Thomas Annear, chairman.  
 W. H. Young.  
 George M. Taylor.  
 Feay B. Smith, secretary.  
 W. L. Hogg, referee.

State compensation insurance fund—Howard Redding, manager.

Minimum wage commission (according to an act passed by the 1917 legislature and effective July 20, 1917, the industrial commission performs the duties of the minimum wage commission).

Address of commission: Denver.

Coal-mine inspection department: James Dalrymple, chief inspector, Denver.

Bureau of Mines (metal mines): John T. Joyce, commissioner, Denver.

**Connecticut****Department of labor and factory inspection:**

Harry E. Mackenzie, commissioner.  
 John J. Burke, deputy commissioner.  
 P. H. Connolly, deputy commissioner of factory inspection.

State employment offices—Harry E. Mackenzie, commissioner.

Address of department: State Capitol, Hartford.

**Board of compensation commissioners:**

Frederic M. Williams, chairman, county courthouse, Waterbury.  
 Charles Kleiner, 151 Court Street, New Haven.  
 Charles E. Williamson, 90 Cannon Street, Bridgeport.  
 Leo J. Noonan, 54 Church Street, Hartford.  
 Albert J. Bailey, Central Building, Norwich.

**State board of mediation and arbitration:**

Frank A. Hagarty, Hartford.  
 Joseph H. Lawlor, Waterbury.  
 Frank M. Creagh, Stamford.

United States Employment Service: Harry E. Mackenzie, Federal director, State Capitol, Hartford.

**Delaware****Labor commission:**

Miss Helen S. Garrett, chairman.  
 John H. Hickey.  
 Newlin T. Booth.  
 Thomas C. Frame, jr.  
 George A. Hill.  
 Miss Marguerite Postles, secretary.

Address of commission: Wilmington.

Child labor division—Charles A. Hagner, chief, Wilmington.

Women's labor division—Miss Marguerite Postles, assistant, Wilmington.

**Industrial accident board:**

Walter O. Stack, president.  
 Robert K. Jones.  
 William J. Swain.  
 James B. McManus, secretary.

Address of Board: Dover, and Delaware Trust Building, Wilmington.

United States Employment Service: LeRoy Kramer, superintendent, Old Custom Building, Wilmington.

**District of Columbia**

United States Employment Service: Agatha E. Diek, superintendent, 312 John Marshall Place N.W., Washington.

**Florida**

State labor inspector: John H. Mackey, Jacksonville.



**Georgia**

## Department of commerce and labor:

H. M. Stanley, commissioner.  
 W. E. Christie, assistant commissioner.  
 Mrs. Edith Coley, chief clerk.  
 P. T. McCutchen, factory inspector.

Address of department: Atlanta.

## Industrial commission:

H. M. Stanley, chairman.  
 George M. Napier, attorney general (ex officio).  
 Max E. Land, representing employers.  
 T. E. Whitaker, representing employees.  
 C. W. Roberts, medical director.  
 Sharpe Jones, secretary-treasurer.  
 Elizabeth Ragland, assistant secretary.  
 A. R. Arnan, auditor and inspector.

Address of commission: Atlanta.

United States Employment Service: Cator Woolford, Federal director, 90 Fairlie Street, Atlanta.

**Hawaii***City and County of Honolulu*

## Industrial accident board:

A. J. Campbell, chairman.  
 M. Macintyre.  
 A. J. Wirtz.  
 E. B. Clark.  
 K. B. Barnes.  
 A. F. Schmitz, secretary.

Address of board: Territorial Office Building, Honolulu, T. H.

*County of Maui*

## Industrial accident board:

Joseph H. Gray, Wailuku.  
 Don T. Carey, Wailuku.  
 Ralph H. Wilson, Wailuku.  
 Mrs. W. Weddick, Lahaina.  
 W. F. Crockett, Wailuku.  
 Mrs. Francis S. Wadsworth, inspector and secretary, Wailuku.

*County of Hawaii*

## Industrial accident board:

Byron K. Baird, chairman.  
 Otto Rose.  
 James Webster.  
 Dr. H. B. Elliot.  
 Gavin A. Bush.  
 Mrs. L. Hazel Bayly, secretary.  
 Address of board: Hilo.

*County of Kauai*

## Industrial accident board:

J. M. Lydgate, chairman, Lihue.  
 H. H. Brodie, Hanapepe.  
 J. B. Fernandez, jr., Kapaa.  
 J. P. Clapper, Kealia.  
 G. M. Coney, Lihue.

**Idaho**

## Industrial accident board:

Lawrence E. Worstell, chairman.  
 Joel Brown.  
 G. W. Suppiger.  
 John D. Case, secretary.

Address of board: Boise.

State insurance fund: F. E. Fisk, Boise.

Inspector of mines: Stewart Campbell, Boise.

**Illinois****Department of labor:**

Barney Cohen, director.

W. B. McHenry, assistant director.

Address of department: State Capitol, Springfield.

Division of factory inspection—William H. Curran, chief inspector, 1543 Transportation Building, Chicago.

Division of private employment agencies—John J. McKenna, chief inspector, 608 South Dearborn Street, Chicago.

Division of free employment offices—Frank P. Unger, State superintendent, Danville.

General advisory board (for Illinois free employment offices)—

B. M. Squires, chairman.

A. H. R. Atwood, M. D., secretary (representing employers).

Oscar G. Mayer (representing employers).

John H. Walker (representing employees).

Miss Agnes Nestor (representing employees).

Address of board: 205 West Wacker Drive, Chicago.

**Industrial commission—**

Clarence S. Piggott, chairman.

Peter Grieve, jr. (representing employers).

H. H. Willoughby (representing employers).

Charles F. Wills (representing employees).

Clayton A. Pense (representing employees).

Walter F. Rohm, secretary.

Address of commission: 205 West Wacker Drive, Chicago.

**Bureau of statistics—**

Howard B. Myers, chief statistician.

Address of bureau: 205 West Wacker Drive, Chicago.

**Department of mines and minerals:**

John G. Millhouse, director, 315 East Cook Street, Springfield.

Peter Joyce, assistant director, 722 North Grand Avenue W., Springfield.

**United States Employment Service:** Ralph B. Powers, Federal director, 116 North Dearborn Street, Chicago.**Indiana****Industrial board:**

Roscoe Kiper, chairman.

Harry J. McMillan.

Walter W. Wills.

William A. Faust.

Horace G. Yergin.

Charles A. Rockwell, secretary.

**Department of factories, buildings, and workshops—**James E. Reagin, chief inspector.**Department of boilers—**James M. Woods, chief inspector.**Department of women and children—**Mrs. Jessie Gremelspacher, director.

Address of board: Indianapolis.

**Department of mines and mining—**Albert C. Dally, chief inspector, Indianapolis.**United States Employment Service:** Walter W. Wills, Federal director, Room 404, State Capitol, Indianapolis.**Iowa****Bureau of labor:** Henry V. Hoyer, commissioner, Des Moines.**State-Federal Employment Service—**

George B. Albert, chief clerk, Des Moines.

John W. Holmes, clerk, Sioux City.

**Workmen's compensation service:**

A. B. Funk, industrial commissioner.

Ralph Young, deputy commissioner.

Ora Williams, secretary.

Dr. Oliver J. Fay, medical counsel.

Address of service: Des Moines.

## State bureau of mines:

W. E. Holland, inspector first district, Centerville.

R. T. Rhys, inspector second district, Ottumwa.

Edward Sweeney, inspector third district, Des Moines.

W. A. Scheek, secretary, Des Moines.

United States Employment Service: Henry V. Hoyer, Federal director, Bureau of Labor, Des Moines.

**Kansas**

Commission of labor and industry: G. Clay Baker, chairman.

Harry C. Bowman, commissioner.

C. J. Beckman, commissioner.

Address of commission: Statehouse, Topeka.

Department of workmen's compensation—G. Clay Baker, chairman.

Harry C. Bowman, commissioner.

Wint Smith, examiner.

Address of commission: Statehouse, Topeka.

Department of labor—

C. J. Beckman, Federal director and commissioner of labor in charge of factory and mine inspection, free employment, and women's and children's division.

Address of department: Statehouse, Topeka.

**Kentucky**

Department of agriculture, labor, and statistics:

Newton Bright, commissioner, Frankfort.

Edward F. Seiller, chief labor inspector, Louisville.

John W. Rogers, deputy labor inspector, Louisville.

John M. Hunt, deputy labor inspector, Covington.

Miss Louie Duncan Brown, deputy labor inspector, Lexington.

Mrs. Hallie B. Williams, deputy labor inspector, Henderson.

Department of mines: John F. Daniel, chief, Lexington.

Workmen's compensation board:

Clyde R. Levi, chairman, Ashland.

Charles Gorman, member, Louisville.

Luther C. Little, member, McKee.

H. S. McGuire, referee, Lexington.

W. T. Short, referee, Richmond.

J. R. Higdon, referee, Owensboro.

T. N. Hazelip, referee, Louisville.

William Dingus, referee, Prestonsburg.

Earl Maxwell Heavrin, secretary, Frankfort.

J. B. Eversole, actuary, Frankfort.

**Louisiana**

Bureau of labor and industrial statistics:

E. L. Engerran, commissioner, New Orleans.

Mrs. Edward Pillsbury, factory inspector, New Orleans.

**Maine**

Department of labor and industry: Charles O. Beals, commissioner, Augusta.

Industrial accident commission:

Donald D. Garcelon, chairman.

Earle L. Russell.

Granville C. Gray.

Charles O. Beals (ex officio), commissioner of labor.

Wilbur D. Spencer (ex officio), insurance commissioner.

Address of commission: Augusta.

State board of arbitration and conciliation:

Frank H. Ingraham, chairman, Rockland.

Edward F. Gowell, Berwick.

William T. Hinckley, secretary, 178 Forrest Avenue, Bangor.

United States Employment Service: Charles O. Beals, Federal director, Statehouse, Augusta.



**Maryland**

Board of labor and statistics: J. Knox Insley, M. D., commissioner, 16 West Saratoga Street, Baltimore.

Bureau of mines—John J. Rutledge, chief mine engineer, 22 Light Street, Baltimore.

Mine examining board—John J. Rutledge, chairman, 22 Light Street, Baltimore.

State industrial accident commission:

Robert H. Carr, chairman.

Omar D. Crothers.

George Louis Eppler.

Albert E. Brown, secretary.

Miss R. O. Harrison, director of claims.

Robert P. Bay, M. D., chief medical examiner.

State accident fund—

James E. Green, jr., superintendent.

Address of commission: 741 Equitable Building, Baltimore.

United States Employment Service: John Allison Muir, Federal director, 306 Water Street, Baltimore.

**Massachusetts**

Department of labor and industries:

E. Leroy Sweetser, commissioner.

Miss Ethel M. Johnson, assistant commissioner.

Associate commissioners (constituting the board of conciliation and arbitration and the minimum wage commission)—

Edward Fisher, chairman.

Herbert P. Wasgatt.

Samuel Ross.

Veronica A. Lynch, secretary to the commissioner.

Division of industrial safety—John P. Meade, director.

Division of statistics (including public employment offices)—Roswell F. Phelps, director.

Division of standards—Francis Meredith, director.

Division of minimum wage—Miss Ethel M. Johnson, acting director.

Industrial commission, Leon M. Lamb, secretary.

Address of department: Statehouse, Boston.

Department of industrial accidents:

William W. Kennard, chairman.

Edward E. Clark.

Joseph A. Parks.

Chester E. Gleason.

Charles M. Stiller.

Mrs. Emma S. Tousant.

Alfred B. Cenedella.

Robert E. Grandfield, secretary.

Francis D. Donoghue, M. D., medical adviser.

Address of department: Boston.

United States Employment Service: E. Leroy Sweetser, Federal director, 473 Statehouse, Boston.

**Michigan**

Department of labor and industry:

Eugene J. Brock, labor commissioner,<sup>1</sup> chairman.

Samuel H. Rhoads, compensation commissioner.

Isabel Larwill, compensation commissioner.

Theo. T. Jacobs, compensation commissioner.

Leo J. Herrick, statistician.

John L. Boer, secretary.

Address of department: Lansing.

State accident fund: Roy M. Watkins, manager, Lansing.

United States Employment Service: Eugene J. Brock, Federal director, State Capitol, Lansing.

<sup>1</sup> The chairman administers the general labor laws of the State other than the workmen's compensation law, which is administered by the three compensation commissioners.

**Minnesota****Industrial commission:**

**Henry McColl**, chairman.

**F. A. Duxbury**.

**J. D. Williams**.

**F. N. Gould**, secretary.

Division of workmen's compensation—**G. E. Hottinger**, chief.

Division of accident prevention—**David R. Henderson**, chief.

Division of boiler inspection—**George Wilcox**, chief.

Division of women and children—**Miss Louise E. Schutz**, superintendent.

Division of statistics—**Carl E. Dahlquist**, chief.

Address of commission: 612 Bremer Arcade, St. Paul.

United States Employment Service: **J. D. Williams**, Federal director, 612 Bremer Arcade, St. Paul.

**Mississippi****Bureau of Industrial Hygiene and Factory Inspection:**

**J. W. Dugger, M. D.**, director.

Address of bureau: P. O. Box 784 New Capitol, Jackson.

**Missouri****Department of labor and industrial inspection:**

**Mrs. Amanda D. Hargis**, commissioner, Jefferson City.

**Workmen's compensation commission:**

**Evert Richardson**, chairman.

**Orin H. Shaw**.

**Jay J. James**.

**Wm. T. Findly**, secretary.

Address of commission: Jefferson City.

**Bureau of Mines:****Inspection department—**

**Frank G. Fenix**, chief inspector, Joplin.

**John H. Boos**, secretary, Jefferson City.

United States Employment Service: **Amanda D. Hargis**, Federal director, State Capitol, Jefferson City.

**Montana****Department of agriculture, labor, and industry:**

**A. H. Stafford**, commissioner.

Division of labor—**Warren W. Moses**, chief.

State employment office—**Warren W. Moses**, chief.

Address of department: Helena.

**Industrial accident board:**

**J. Burke Clements**, chairman.

**G. P. Porter**, State auditor and (ex officio) commissioner of insurance.

**A. H. Stafford** (ex officio), treasurer of the board.

**Gordon G. Watt**, secretary.

**Harold O. Mead**, chief accountant.

**Duncan McRae**, clerk.

Bureau of safety inspection, **Duncan McRae**, chief clerk.

Address of board: Helena.

United States Employment Service: **A. H. Stafford**, Federal director, Helena.

**Nebraska****Department of labor: Ernest M. Pollard**, secretary of labor and commissioner.

Bureau of compensation—**J. H. Jeffrey**, chief.

Address of department: State Capitol, Lincoln.

**Nevada**

Office of labor commissioner: William Royle, labor commissioner, Carson City.  
Industrial commission:

Dan J. Sullivan, chairman.

Alex L. Tannahill.

William Royle.

Vinton A. Muller, M. D., chief medical adviser, Reno.

Address of commission: Carson City.

Inspector of mines: A. J. Stinson, Carson City.

United States Employment Service: William Royle, Federal director, 34 Capitol Building, Carson City.

**New Hampshire**

Bureau of labor:

John S. B. Davie, commissioner, Concord.

Bion L. Nutting, factory inspector, Concord.

Harold I. Towle, factory inspector, Laconia.

Mary R. Chagnon, factory inspector, Manchester.

State board of conciliation and arbitration:

J. R. McLane (representing public), Manchester.

Walter F. Duffy (representing manufacturers), Franklin.

William J. Cullen (representing labor), Manchester.

United States Employment Service: John S. B. Davie, Federal director, State Capitol, Concord.

**New Jersey**

Department of labor: Charles R. Blunt, commissioner.

Bureau of general and structural inspection and explosives—Charles H. Weeks, deputy commissioner of labor.

Bureau of hygiene, sanitation, and mine inspection—John Roach, deputy commissioner of labor.

Bureau of electrical and mechanical equipment—  
(Vacancy), chief.

Charles H. Weeks and John Roach, deputy commissioners, temporarily in charge.

Bureau of statistics and records—James A. T. Gribbin, chief.

Bureau of women and children—Mrs. Isabelle M. Summers, director.

Bureau of engineers' license, steam boiler, and refrigerating plant inspection—  
Joseph F. Scott, chief examiner.

Bureau of workmen's compensation—

Charles R. Blunt, commissioner.

William E. Stubbs, deputy commissioner and secretary.

Harry J. Goas, deputy commissioner.

Charles E. Corbin, deputy commissioner.

John J. Stahl, referee.

John W. Kent, special investigator.

John C. Wegner, special investigator.

Harry F. Monroe, special investigator.

Frank C. Mobius, special investigator.

Hugh J. Arthur, special investigator.

William J. Wilkie, special investigator.

Maurice S. Avidan, M. D., medical adviser.

William C. Stuart, M. D., medical adviser.

James C. Keeney, M. D., medical adviser.

Bureau of employment—Russell J. Eldridge, director.

Address of department: Trenton.

United States Employment Service: Charles R. Blunt, Federal director, State-house, Trenton.

**New Mexico**

State inspector of coal mines: W. W. Risdon, Gallup.



**New York****Department of labor:**

Frances Perkins, industrial commissioner.  
 Elmer F. Andrews, deputy industrial commissioner.  
 Sara McPike, secretary.

**Industrial board—**

Richard J. Cullen, chairman.  
 James S. Whipple.  
 Edward W. Edwards.  
 Leonard W. Hatch.  
 Nelle Swartz.

Bureau of inspection—James L. Gernon, director.

Bureau of workmen's compensation—

Verne A. Zimmer, director.  
 Raphael Lewy, M. D., chief medical examiner.

Bureau of industrial relations—James Brady, director.

Division of mediation and arbitration—A. J. Portenar, chief mediator.  
 Division of employment—Fritz Kaufmann, chief, 114 East Twenty-fifth Street, New York.

Division of aliens—Lillian R. Sire, director.

Division of industrial codes—

Thomas C. Eipper, referee.  
 Edward E. J. Pierce, referee.

Division of engineering—William J. Picard, chief, Albany.

Bureau of industrial hygiene—James D. Hackett, director.

Bureau of statistics and information—

Eugene B. Patton, director.  
 S. W. Wilcox, chief statistician, Albany.

Bureau of women in industry—Frieda S. Miller, director.

State insurance fund—C. G. Smith, manager, 432 Fourth Avenue, New York.

Division of self-insurance—J. A. McGinniss, director.

General address of department, except where otherwise noted: 124 East Twenty-eighth Street, New York.

United States Employment Service: Frances Perkins, Federal director for State, 124 East Twenty-eighth Street, New York.

**North Carolina**

Department of labor and printing: Frank D. Grist, commissioner, Raleigh.

Child welfare commission—E. F. Carter, secretary and executive officer, Raleigh.

**Industrial commission:**

Matt H. Allen, chairman.  
 J. Dewey Dorsett, representing employers.  
 T. A. Wilson, representing employees.  
 E. W. Price, secretary.

Address of commission: Raleigh.

United States Employment Service: Frank D. Grist, Federal director for State, Raleigh.

**North Dakota**

Department of agriculture and labor: Joseph A. Kitchen, commissioner, Bismarck.

**Workmen's compensation bureau:**

Joseph A. Kitchen, chairman.  
 W. C. Preckel.  
 S. A. Olsness.  
 W. H. Stutsman.  
 R. E. Wenzel.  
 Carl E. Knudtson, secretary.

Address of bureau: Bismarck.

Minimum wage commission: Alice Angus, secretary, Bismarck.

Coal mine inspection department: Edwin R. Rupp, inspector, Bismarck.

United States Employment Service: S. R. St. Pierre, superintendent, 602 North Pacific Avenue, Fargo.

**Ohio**

Department of industrial relations: William T. Blake, director.

Industrial commission—

Wellington T. Leonard, chairman.

L. E. Nysewander.

Thomas M. Gregory.

William T. Blake, secretary.

Division of workmen's compensation—

Ross Hedges, assistant director, department of industrial relations.

Dale W. Stump, supervisor of claims.

Evan I. Evans, supervisor of actuarial division.

G. L. Coffinberry, auditor and statistician.

H. H. Dorr, M. D., chief medical examiner.

Division of labor statistics and employment offices—George F. Miles, chief.

Division of safety and hygiene—

Thomas P. Kearns, superintendent.

Carl C. Beasor, chief statistician.

Division of factory inspection—Thomas C. Devine, chief

Division of boiler inspection—Mark Benner, chief.

Division of examiners of steam engineers—David J. Lewis, chief.

Division of mines—E. W. Smith, chief.

Address of department: Columbus.

United States Employment Service: George F. Miles, Federal director, Pure Oil Building, Columbus.

**Oklahoma**

Department of labor:

W. A. Pat Murphy, commissioner.

James Hughes, assistant commissioner.

Bureau of factory inspection—Fred Kemp, chief inspector.

Division of women and children in industry—

Zelda Harrel, inspector.

Grace Clark, inspector.

Bureau of labor statistics—Adah E. Mauldin, statistician.

Bureau of free employment—

Oklahoma City office (men's division), J. R. McCarty, superintendent.

Oklahoma City office (women's division), Mrs. L. C. Pierce, superintendent.

Tulsa office, E. N. Ellis, superintendent.

Muskogee office, S. A. Reed, superintendent.

Enid office, J. O. Roach, superintendent.

State board of arbitration and conciliation—

W. A. Pat Murphy, chairman.

James Hughes, secretary.

Address of department except where otherwise noted: Oklahoma City.

Industrial commission:

Thomas H. Doyle, chairman.

Mrs. F. L. Roblin, commissioner.

Mat McElroy, commissioner.

Dennis Bushyhead, secretary.

Nancy Hood, statistician.

Address of commission: Oklahoma City.

United States Employment Service: W. A. Pat Murphy, Federal director, State Capitol, Oklahoma City.

**Oregon**

Bureau of labor:

C. H. Gram, commissioner and factory inspector, Salem.

Carl Stoll, deputy commissioner, Portland.

Board of inspectors of child labor:

Mrs. Sarah A. Evans, chairman.

Miss Pauline Kline.

Mrs. Harry M. Stone.

Mrs. Millie R. Trumbull, secretary.

Address of board: 707 Oregon Building, Portland.

**Industrial welfare commission:**

Leslie M. Scott, chairman.

F. C. Whitten.

Mrs. Elizabeth J. Williams.

Mrs. Millie R. Trumbull, secretary and inspector.

Address of commission: 707 Oregon Building, Portland.

**State industrial accident commission:**

W. H. Fitzgerald, chairman.

E. E. Bragg.

Sam Laughlin.

F. H. Thompson, M. D., medical examiner.

Address of commission: Salem.

**State board of conciliation:**

William L. Brewster, chairman, Failing Building, Portland.

Charles N. Ryan, 704 Couch Building, Portland.

William E. Kimsey, secretary, 286 Main Street, Portland.

United States Employment Service: C. H. Gram, Federal director, Room 550, Courthouse, Portland.

**Pennsylvania**

Department of labor and industry: Peter Glick, secretary.

**Industrial board—**

Peter Glick, chairman.

A. L. Linderman.

John A. Phillips.

George W. Fisher.

Mrs. Hugh Neely Fleming.

J. S. Arnold, secretary.

**Workmen's insurance board—**

Peter Glick, chairman.

M. H. Taggart, insurance commissioner.

Edward Martin, State treasurer.

**State workmen's insurance fund—Philip H. Dewey, manager.****Workmen's compensation board—**

Paul W. Houck, chairman.

Joseph E. Fleitz.

J. L. Morrison.

Peter Glick, ex officio.

J. C. Detweiler, secretary.

Bureau of executive—W. A. Riddle, deputy secretary.

Bureau of workmen's compensation—W. H. Horner, director.

Bureau of employment—S. S. Riddle, director.

Bureau of industrial relations—David Williams, director.

Bureau of industrial standards—John Campbell, director.

Bureau of women and children—Sarah M. Soffel, director.

Bureau of inspection—Harry D. Immel, director.

Bureau of rehabilitation—William S. Crozier, director.

Bureau of statistics—William J. Maguire, director.

Bureau of bedding and upholstery—M. P. Frederick, director.

Bureau of accounting—William C. Halfpenny, director.

Address of department: Harrisburg.

**Department of mines:**

Walter H. Glasgow, secretary.

John Reese James, deputy secretary (anthracite division).

John Ira Thomas, deputy secretary (bituminous division).

Address of department: Harrisburg.

United States Employment Service: Silas S. Riddle, Federal director, Bureau of Employment, 410 South Office Building, the Capitol, Harrisburg.

**Philippine Islands**

Bureau of labor (under department of commerce and communications): Her-menegildo Cruz, director, Manila.



**Porto Rico**

Department of agriculture and labor: Carlos E. Chardon, **commissioner**.  
 Bureau of labor—Carmelo Honore, **chief**.  
 Mediation and conciliation commission—Luis Villarenga Charriez.  
 Address of department: San Juan.

**Industrial commission:**

Juan M. Herrero, **chairman**.  
 M. Leon Parra, **commissioner**.  
 P. Rivera Martinez, **commissioner**.  
 Joaquin A. Becerril, **secretary**.  
 Address of commission: San Juan.

**Rhode Island**

Department of labor: Edward L. Byers, **commissioner**, Providence.  
 Office of factory inspectors: J. Ellery Hudson, **chief inspector**, Providence.  
 Board of labor (for the adjustment of labor disputes):  
 Edward L. Byers, **commissioner of labor, chairman**.  
 Edwin O. Chase (representing employers).  
 William C. Fisher (representing employers).  
 Albert E. Hohler (representing employees).  
 John H. Powers (representing employees).  
 Christopher M. Dunn, **deputy commissioner of labor, secretary**.  
 Address of board: Providence.  
 United States Employment Service: Edward L. Byers, **Federal director**, Room 318, State Capitol, Providence.

**South Carolina**

Department of agriculture, commerce, and industries: J. W. Shealy, **commissioner**.  
 Labor division—A. H. Gibert, jr., **chief inspector**.  
 Address of department, Columbia.  
 Board of conciliation and arbitration:  
 James C. Self, **chairman**, Greenwood.  
 H. E. Thompson, **secretary**, Batesburg.  
 W. H. McNairy, **Dillon**.

**South Dakota**

Office of industrial commissioner: F. L. Perry, **industrial commissioner**, Pierre.  
 United States Employment Service: Charles McCaffree, **Federal director**,  
 Sioux Falls National Bank Building, Sioux Falls.

**Tennessee**

Department of labor:  
 James M. Southall, **commissioner**.  
 Albert M. Alexander, **secretary**.  
 Division of factory inspection—M. F. Nicholson, **chief inspector**.  
 Division of mines—A. W. Evans, **chief inspector**, Petros.  
 Division of hotel inspection—Sam I. Bolton, **inspector**.  
 Division of workmen's compensation—W. M. Hannah, **superintendent**.  
 Address of department except where otherwise noted: Nashville.

**Texas**

Bureau of labor statistics:  
 Charles McKemy, **commissioner**.  
 Robert B. Gragg, **chief deputy**.  
 Miss Nell Kirkpatrick, **secretary**.  
 Miss Marie Nash, **assistant secretary**.  
 Address of bureau: Austin.  
 Industrial commission (handles industrial disputes):  
 Carl Pool, **chairman**, Sherman.  
 A. L. Kinsley, **secretary**, San Antonio.  
 W. J. Moran, **El Paso**.  
 Harry L. Spencer, **Houston**.  
 L. L. Shields, **Coleman**.

**Industrial accident board:**

Earle P. Adams, chairman.  
Mrs. Espa Stanford, member.  
H. T. Kimbro, member.  
W. V. Howerton, secretary.  
Address of board: Austin.

United States Employment Service: C. W. Woodman, assistant director, 806 Taylor Street, Fort Worth.

**Utah****Industrial commission:**

William M. Knerr, chairman.  
C. F. McShane.  
Henry N. Hayes.  
Carolyn I. Smith, secretary.  
State insurance fund—Charles A. Caine, manager.  
Coal mine inspector—John Taylor.  
Address of commission: Salt Lake City.

**Vermont****Office of commissioner of industries:**

Clarence R. White, commissioner, Montpelier.  
Fred S. Pease, deputy commissioner, Burlington.  
Charles A. Root, factory inspector, Burlington.

United States Employment Service: Clarence R. White, Federal director, State Capitol, Montpelier.

**Virginia****Department of labor and industry:**

John Hopkins Hall, jr., commissioner.  
H. W. Furlow, assistant commissioner.  
Miss Virginia J. Reynolds, secretary.  
Division of mines—A. G. Lucas, chief.  
Division of factory inspection—S. A. Minter, chief.  
Division of women and children—Miss Carrie B. Farmer, director.  
Division of industrial statistics—Miss Elizabeth Myers, statistician.  
Address of department: Richmond.

**Industrial commission:**

W. H. Nickels, jr., chairman.  
C. G. Kizer.  
Parke P. Deans.  
W. F. Bursey, secretary.  
Wade M. Miles, deputy commissioner, Bristol.  
F. P. Evans, statistician.  
W. L. Robinson, examiner.

Address of commission, except where otherwise noted: State Office Building, Richmond.

United States Employment Service: John Hopkins Hall, jr., Federal director, Room 318 State Office Building, Richmond.

**Washington****Department of labor and industries:**

Claire Bowman, director.  
H. D. Hailey, secretary.  
Division of industrial insurance—  
John Shaughnessy, supervisor of industrial insurance and medical aid.  
L. L. Goodnow, M. D., chief medical adviser.  
R. J. McLean, claim agent.  
Division of safety—  
L. M. Rickerd, supervisor of safety.  
William R. Reese, mines inspector.  
George T. Wake, deputy mine inspector.  
Division of industrial relations—  
L. M. Rickerd, supervisor of industrial relations.  
William J. Coates, assistant supervisor of industrial relations.  
R. M. Van Dorn, industrial statistician.  
Mrs. G. V. Haney, supervisor of women in industry.

## Industrial welfare committee—

Claire Bowman, director of labor and industries, chairman.

John Shaughnessy, supervisor of industrial insurance.

L. M. Rickerd, supervisor of industrial relations.

R. M. Van Dorn, industrial statistician.

Mrs. G. V. Haney, supervisor of women in industry, executive secretary.

Address of department: Olympia.

United States Employment Service: W. C. Carpenter, Federal director, 421 Federal Building, Spokane.

## West Virginia

Bureau of labor: Howard S. Jarrett, commissioner, Charleston.

## Workmen's compensation department:

Lee Ott, commissioner.

John T. Moore, assistant to commissioner.

C. D. Smith, secretary.

J. E. Brown, attorney.

J. W. Smiley, actuary.

Lewis J. Frey, statistician.

Russel Kessel, chief medical examiner.

Address of department: Charleston.

Department of mines: R. M. Lambie, chief, Charleston.

United States Employment Service: Howard S. Jarrett, Federal director, Public Library Building, Charleston.

## Wisconsin

## Industrial commission:

Fred M. Wilcox, chairman.

R. G. Knutson.

Voyta Wrabetz.

A. J. Altmeyer, secretary.

Safety and sanitation department—R. McA. Keown, engineer.

Workmen's compensation department—F. T. McCormick, H. A. Nelson,

A. T. Flint, I. M. Kittleson, H. F. Ohm, examiners.

Apprenticeship department—Walter F. Simon, supervisor.

Woman and child labor department—

Taylor Frye, director.

Miss Maud Swett, field director, Milwaukee.

Statistical department—Orrin A. Fried, statistician.

Address of commission: Madison.

## Board of conciliation:

Chris Hochgreve, Green Bay.

Jacob P. Beuscher, Milwaukee.

Homer Witzig, Superior.

United States Employment Service: R. G. Knutson, Federal director, State Capitol, Madison.

## Wyoming

## Department of labor and statistics:

Harry C. Hoffman, commissioner.

W. E. Jones, deputy commissioner.

## Child labor board—

Harry C. Hoffman, secretary.

N. D. Morgan.

W. H. Hassed, M. D.

Address of department: Cheyenne.

## Coal-mine inspection department—

Lyman Fern, chief, Rock Springs.

David K. Wilson, deputy, Rock Springs.

R. E. Gildroy, deputy, Sheridan.

## Workmen's compensation department (under State treasurer's office).

W. H. Edelman, State treasurer.

C. B. Morgan, deputy treasurer.

Arthur Calverley, assistant deputy and department manager.

Address of department: Cheyenne.



**Albania**

Ministry of Public Works (address, Tirana).

**Argentina**

Ministry of the Interior (address, Buenos Aires):  
National labor department.

**Australia**

Commonwealth Bureau of Census and Statistics (address, Melbourne).

**Austria**

Federal Ministry of Social Administration (address, 1 Hanuschgasse 3, Vienna).

**Belgium**

Ministry of Industry, Labor, and Social Welfare (address, 12 Rue Lambermont, Brussels):  
Labor office.

**Bolivia**

National Labor Office (address, La Paz).  
Ministry of Promotion (address, La Paz).

**Brazil**

Ministry of Agriculture, Industry, and Commerce (address, Rio de Janeiro).

**Bulgaria**

Ministry of Commerce, Industry, and Labor (address, Rue Alaninska, 48, Sofia):  
Labor section.

**Canada**

Department of labor:

Peter Heenan, minister.  
H. H. Ward, deputy minister.  
Gerald H. Brown, assistant deputy minister.  
M. S. Campbell, chief conciliation officer.  
J. D. O'Neill, legal adviser.  
R. A. Rigg, director of employment service.  
E. G. Blackadar, superintendent of Dominion Government annuities.  
F. A. McGregor, registrar of combines investigation act.  
C. W. Bolton, chief of statistical branch.  
F. J. Plant, chief of labor intelligence branch.  
Address of department: Ottawa, Ontario.

**Alberta**

Bureau of labor:

W. Smitten, commissioner of labor.  
F. W. Hobson, chief boiler inspector.  
H. M. Bishop, chief factory inspector.  
G. P. Barber, chief theater inspector.  
A. A. Millar, chief mine inspector.  
Employment service—William Carnill, director.  
Minimum wage board—  
A. A. Carpenter, chairman.  
W. Smitten, commissioner of labor, secretary.  
Address of bureau: Edmonton.

Government employment bureau:

L. J. Ricka, superintendent, Calgary.  
W. G. Paterson, superintendent, Edmonton.  
A. R. Redshaw, superintendent, Lethbridge.  
J. W. Wright, superintendent, Medicine Hat.  
A. A. Colquhoun, superintendent, Drumheller.

**Workmen's compensation board:**

Alex Ross, chairman.

Walter F. McNeill, commissioner.

James A. Kinney, commissioner.

Frederick D. Noble, secretary.

Address of board: Qu'Appelle Building, Edmonton.

**British Columbia****Department of labor:**

Hon. W. A. McKenzie, minister, Victoria.

J. D. McNiven, deputy minister, Victoria.

W. T. Hamilton, chief factories inspector, Vancouver.

Employment service—J. H. McVety, general superintendent, Vancouver.

Minimum wage (for females) board—

J. D. McNiven, deputy minister of labor, chairman.

Mrs. Helen G. MacGill.

Thomas Mathews.

Miss Mabel Agnes Cameron, secretary.

Hours of work and minimum wage (for males) board—J. D. McNiven, deputy minister of labor, chairman, Parliament Building, Victoria.

**Workmen's compensation board:**

E. S. H. Winn, K. C., chairman.

Parker Williams.

Hugh B. Gilmour.

F. W. Hinsdale, secretary.

Address of board: Board of Trade Building, Vancouver.

**Manitoba****Bureau of labor:**

W. R. Clubb, minister of public works.

Edward McGrath, secretary.

Arthur MacNamara, assistant deputy minister of public works.

**Fair wage board—**

D. L. McLean, power commissioner.

J. W. Morley.

E. Claydon.

Thomas J. Williams.

C. J. Harding.

**Minimum wage board—**

George N. Jackson, chairman.

Mrs. Edna M. Nash.

James Winning.

Mrs. Jessie Macleannon.

Address of bureau: Winnipeg.

**Workmen's compensation board:**

C. K. Newcombe, commissioner.

George E. Carpenter, director.

Fred J. Dixon, director.

A. J. Fraser, M. D., chief medical officer.

Nicholas Fletcher, secretary.

P. V. E. Jones, assistant secretary.

Address of board: Winnipeg.

**New Brunswick****Department of labor: H. I. Taylor, minister, St. George.****Workmen's compensation board:**

J. A. Sinclair, chairman.

F. C. Robinson.

J. L. Sugrue.

**Department of factory inspection—John Kenney, inspector.**

Address of board: St. John.

**Nova Scotia**

## Department of public works and mines:

Col. the Hon. Gordon S. Harrington, minister.

Norman McKenzie, deputy minister.

Address of department: Halifax.

## Workmen's compensation board:

F. L. Milner, K. C., chairman.

Fred W. Armstrong, vice chairman.

John T. Joy, commissioner.

Dr. M. D. Morrison, medical officer.

John McKeagan, assessment officer.

N. M. Morison, claims officer.

Miss M. M. Skerry, secretary.

Address of board: Halifax.

## Employment service:

C. J. Cotter, superintendent men's division, Halifax.

Miss Elda E. Caldwell, superintendent women's division, Halifax.

**Ontario**

## Department of labor:

Hon. Dr. Forbes Godfrey, minister.

James H. H. Ballantyne, deputy minister.

D. M. Medcalf, chief inspector of steam boilers.

James T. Burke, chief inspector of factories, shops, and office buildings.

J. M. Brown, chairman stationary and hoisting engineers' board.

Employment service—H. C. Hudson, general superintendent, Ontario, offices.

Address of department: East Block, Parliament Buildings, Toronto.

## Minimum wage board:

Dr. J. W. Macmillan, chairman.

H. G. Fester.

Mrs. Lydia M. Parsons.

Miss Margaret Stephens.

R. A. Stapells.

Address of board: East Block, Parliament Buildings, Toronto.

## Workmen's compensation board:

Victor A. Sinclair, K. C., chairman.

Henry J. Halford, vice chairman.

George A. Kingston, commissioner.

N. B. Wormith, secretary.

T. Norman Dean, statistician.

F. W. Graham, claims officer.

D. E. Bell, chief medical officer.

J. M. Bremner, medical officer.

J. F. Hazlewood, medical officer.

Address of board: Metropolitan Building, Toronto.

**Quebec**

## Department of public works and labor:

Antonin Galipeault, K. C., minister, Quebec.

Louis Guyon, deputy minister and chief inspector of industrial establishments and public buildings, 63 Notre Dame Street E., Montreal.

Alfred Robert, fair wages officer and deputy chief inspector, 63 Notre Dame Street E., Montreal.

Felix Marois, registrar of board of conciliation and arbitration, Parliament Buildings, Quebec.

Joseph Ainey, general superintendent of provincial employment bureaus, 61 Notre Dame Street E., Montreal.

## Women's minimum wage commission—

Gustave Francq, chairman, 59 Notre Dame Street E., Montreal.

Alfred Crowe, secretary, 231 St. Paul Street, Quebec.

## Workmen's compensation commission:

Robert Taschereau, K. C., chairman.

Simon Lapointe, K. C.

O. E. Sharpe.

O. G. Molleur, secretary.

Address of commission: 73 Grande Allee, Quebec.



**Saskatchewan****Department of railways, labor, and industries:**

Hon. J. A. Merkley, minister.  
 Thomas M. Molloy, deputy minister.  
 Thomas Inglis, chief boiler inspector.  
 Samuel A. Lee, mines inspector.  
 A. E. Etter, game commissioner.  
 Gerald E. Tomsett, general superintendent of employment service.  
 Miss G. Halbert, minimum wage inspector.

Address of department: Farmer's Building, Regina.

**Minimum wage board:**

John A. Mather, chairman, Saskatoon.  
 Mrs. William Allen, member, Moose Jaw.  
 J. P. Keleher, member, Moose Jaw.  
 Mrs. F. M. Eddie, member, Regina.  
 J. R. K. Williams, member, Regina.  
 T. M. Molloy, deputy minister of labor, acting secretary, Regina.

**Chile**

Ministry of Social Welfare (address, Santiago).

**China**

Ministry of Industry, Commerce and Labor (address, Nanking).  
 Department of Labor.<sup>2</sup>

**Colombia****General Labor Office:**

Ministry of Industries (address, Bogota).

**Costa Rica**

Ministry of Public Works (address, San Jose).

**Cuba**

Secretariat of Agriculture, Commerce, and Labor (address, Habana).

**Czechoslovakia**

Ministry of Social Welfare<sup>3</sup> (address, Valdstynska, 10, Prague, III).  
 Ministry of Public Works<sup>4</sup> (address, Presslova, 6, Prague-Smichov).

**Denmark****Social Ministry:**

Labor board (address, 25 Amaliegade, Copenhagen).  
 Labor and factory inspection department (address, 25 Amaliegade, Copenhagen).  
 Workmen's compensation board (address, 3 Kongens Nytorv, Copenhagen).

**Dominican Republic**

Department of Agriculture and Commerce (address, San Domingo).

**Dutch East Indies**

Department of Justice (address, Batavia, Java):

Labor bureau.

**Ecuador**

Ministry of Public Welfare and Labor (address, Quito).

<sup>1</sup> Three sections dealing with labor organizations, labor legislation, and social welfare, respectively.

<sup>2</sup> Handles labor relations at large.

<sup>3</sup> Labor questions relating to workers in mines; legislation; insurance statistics.

**Egypt**

Ministry of Interior, Council of Arbitration (address, Cairo).

**Estonia**

Ministry of Education and Social Welfare (address, Tallinn).

**Finland**

Ministry of Social Affairs (address, Helsingfors).

**France**

Ministry of Labor and Hygiene (address, Rue de Grenelle, 127, Paris).

**Germany**

Ministry of Labor (address, Scharnhorststrasse, 35, Berlin NW., 40).

**Great Britain**

Ministry of Labor (address, Montague House, Whitehall, London SW., 1).

**Greece**

Ministry of National Economy (address, Rue Valaoritou, 3, Athens):  
Directorate of labor and social welfare.

**Guatemala**

Ministry of Public Works <sup>5</sup> (address, Guatemala).  
Ministry of Agriculture <sup>6</sup> (address, Guatemala).

**Haiti**

Department of Labor (address, Port au Prince).

**Honduras**

Minister of Public Works and Agriculture (address, Tegucigalpa).

**Hungary**

Ministry of Social Welfare and Labor (address, Kyralyi Palota, Budapest).  
Government Statistical Office (address, II Keleti Karoly utca 5, Budapest).

**India**

Department of Industries (address, Delhi).  
Labour Office of the Government of Bombay (address, Bombay).

**Irish Free State**

Department of Industry and Commerce (address, Government Building, Dublin).

**Italy**

Ministry of Corporations (address, Rome).

**Japan**

Bureau of Social Affairs (address, Tokyo).

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<sup>5</sup> Handles questions relating to urban labor matters.

<sup>6</sup> Handles questions relating to rural labor matters.

**Latvia**

Ministry of Public Welfare (address, Riga).

**Lithuania**

Ministry of Home Affairs (address, Kaunas).

**Luxemburg**

General Directorate of Agriculture, Industry, and Social Welfare (address, Luxemburg City):  
Division of commerce, industry, and labor.

**Mexico**

Department of Industry, Commerce, and Labor (address, Avenida Republica Argentina, num. 12, Mexico City).

**Netherlands**

Ministry of Labor, Commerce, and Industry (address, Beznidenhout, The Hague).

**New Zealand**

Department of Labor (address, Wellington).

**Nicaragua**

Ministry of Public Works (address, Managua).

**Norway**

Ministry of Social Affairs (address, Viktoria terrasse, 11-13, Oslo).

**Panama**

Ministry of Agriculture and Public Works (address, Panama).

**Paraguay**

Ministry of Interior (address, Asuncion).

**Persia**

Ministry of Commerce, Agriculture, and Public Works (address, Teheran).

**Peru**

Ministry of Public Works (address, Lima).

**Poland**

Ministry of Labor and Social Welfare (address, Place Dombrowski, 1, Warsaw)

**Portugal**

Ministry of Commerce and Communications (address, Lisbon).

**Rumania**

Ministry of Labor (address, Bucharest).

**Salvador**

Ministry of the Interior, Industry, and Agriculture (address, San Salvador).



**Siam**

Ministry of Commerce and Communications (address, Bangkok):  
Board of commercial development (deals with labor matters).

**Spain**

Ministry of Labor, Commerce, and Industry (address, Paseo de la Castellana, 3, Madrid).

**Sweden**

Ministry of the Interior, Division of Social Affairs (address, Mynttorget 2, Stockholm):  
Social board.

**Switzerland**

Federal Department of National Economy (address, Palais Federal, Berne):  
Federal labor office.

**Turkey**

Ministry of Economy (address, Ankara (Angora), Turkey).

**Union of South Africa**

Department of Labor (address, Pretoria).

**Uruguay**

Ministry of Industries (address, Montevideo):  
National Labor Office.

**Venezuela**

Ministry of Agriculture, Mines and Trade (address, Caracas).

**Yugoslavia**

Ministry of Social Policies (address, Belgrade).

# PUBLICATIONS RELATING TO LABOR

## Official—United States

ALASKA.—Governor. *Annual report to the Secretary of the Interior, for fiscal year ended June 30, 1929.* Washington, Department of the Interior, 1929. 144 pp.; map, charts, illus.

Data on wages and labor conditions are given in this issue.

IDAHO.—Mine Inspector. *Thirty-first annual report of the mining industry of Idaho for the year 1929.* [Boise, 1930.] 300 pp., illus.

Data on mine wages and accidents are given in this issue.

MARYLAND.—Industrial Accident Commission. *Fifteenth annual report, for the year November 1, 1928, to October 31, 1929.* Baltimore [1930?]. 45 pp.

Reviewed in this issue.

NEW YORK.—Board of Housing. *Report.* Albany, 1930. 105 pp.; plans, illus. (Legislative document (1930) No. 84.)

Reviewed in this issue.

— Comptroller. *Ninth report on the operation of the State employees' retirement system, together with the report of the actuary on the ninth valuation of its assets and liabilities as of June 30, 1929.* Albany, 1930. 46 pp. (Legislative document (1930) No. 12.)

Reviewed in this issue.

SOUTH DAKOTA.—Industrial Commissioner. *Twelfth annual report, for the 12 months ending June 30, 1929.* Pierre [1929?]. 38 pp.

Reviewed in this issue.

VIRGINIA.—Department of Labor and Industry. *Thirty-second annual report, for the year ending September 30, 1929.* Richmond, 1930. 107 pp.

Data on wages and hours of labor are published in this issue.

UNITED STATES.—Congress. House of Representatives. Committee on Immigration and Naturalization. *Western Hemisphere immigration. Hearings on H. R. 8523, H. R. 8530, H. R. 8702, to limit the immigration of aliens to the United States and for other purposes.* Washington, 1930. 457 pp. (Seventy-first Cong., 2d sess.)

— Department of Commerce. Bureau of Foreign and Domestic Commerce. *Trade promotion series No. 92: The coffee industry in Brazil, by Walter Gay McCreery and Mary L. Bynum.* Washington, 1930. 88 pp., illus.

The section relating to labor is summarized in this issue.

— Bureau of Mines. *Bulletin 319: Coal-mine fatalities in the United States, 1928, by William W. Adams.* Washington, 1930. 125 pp.

Reviewed in this issue.

— Information circular 6269: *Suggested safety rules for installing and using electrical equipment in coal mines, by L. C. Ilsley and Charles M. Means.* Washington, 1930. 22 pp.

— Report of investigations 2993: *Some phases of the relative responsibility of management and workers for accidents in mines, by D. Harrington.* Washington, 1930. 17 pp. (Mimeographed.)

Reviewed in this issue.

— Technical paper 468: *Coke-oven accidents in the United States during the calendar year 1928, by W. W. Adams and L. Chenoweth.* Washington, 1930. 35 pp.

Reviewed in this issue.

UNITED STATES.—Department of Labor. Bureau of Labor Statistics. *Bulletin No. 510: Labor legislation of Argentina. Washington, 1930. 124 pp.*

Summarized in the Labor Review for May, 1930 (pp. 1-8).

— — — — *Bulletin No. 511: Proceedings of the sixteenth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Buffalo, N. Y., October 8-11, 1929. Washington, 1930. 345 pp.*

A brief account of this meeting was published in the Labor Review for November, 1929 (p. 48).

— — — — *Bulletin No. 513: Wages and hours of labor in the iron and steel industry, 1929. Washington, 1930. 201 pp.*

Summary figures from this survey were published in the Labor Review for September, October, and November, 1929.

— — — — *Bulletin No. 514: Pennsylvania Railroad wage data, from report of joint fact-finding committee in wage negotiations, 1927. Washington, 1930. 209 pp.*

— — — — *Bulletin No. 516: Hours and earnings in bituminous-coal mining, 1929. Washington, 1930. 63 pp.*

Summary figures from this survey were published in the Labor Review for September, 1929 (pp. 130-139).

— — — — *Bulletin No. 519: Safety code for woodworking plants, as revised, 1930. Washington, 1930. 18 pp.*

— — — — Children's Bureau. *Publication No. 197: Child labor—facts and figures. Washington, 1930. 133 pp.; maps.*

A reprint of material issued in bureau publications No. 93 and No. 114, and in a leaflet, *Legal regulation of the employment of minors 16 years of age and over.*

— — — — Women's Bureau. *Bulletin No. 73: Variations in employment trends of women and men. Washington, 1930. 141 pp.; charts.*

Reviewed in this issue.

— *Laws, statutes, etc. Compilation of laws relating to mediation, conciliation, and arbitration between employers and employees; laws disputes between carriers and employers and subordinate officials under Labor Board; eight-hour laws; employers' liability laws. Compiled by Elmer A. Lewis. Washington, 1930. 105 pp.*

### Official—Foreign Countries

BOLIVIA.—Ministerio de Gobierno. *Anuario administrativo de 1928. La Paz, [1930?]. 1580 pp.*

Administrative yearbook of Bolivia for the year 1928. Contains all the measures passed by the Bolivian Congress during that year, arranged chronologically with an alphabetical and chronological index.

BREMEN (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch der freien hansestadt Bremen, 1929. Bremen, 1929. Various paging; map, charts.*

Yearbook for the city of Bremen for 1929. Contains statistical information on housing, cooperation, social insurance, employment and unemployment, public health and welfare work, and other conditions related to labor.

FINLAND.—Bureau Central de Statistique. *Annuaire statistique de Finlande, 1929. Helsingfors, 1929. 355 pp. (In Finnish and French.)*

Statistical yearbook of Finland for 1929. Contains data on emigration, social insurance, public instruction, sanitary service, workers' mutual savings banks, industrial accidents, strikes and lockouts, labor unions, wages, employment offices, etc.

GREAT BRITAIN.—Department of Overseas Trade. *Economic conditions in Hungary (1928-29), by E. H. Mulock. London, 1930. 42 pp.*

Among the subjects covered in the report are prices and cost of living, industrial production, unemployment, etc.



GREAT BRITAIN.—India Office. *Statement exhibiting the moral and material progress and condition of India during the year 1928-29.* London, 1930. 416 pp.; maps, charts, illus.

An official discussion of a wide variety of Indian affairs, including cooperation, employment of women and children, standard of living of agriculturalists, sickness insurance, strikes, and unemployment.

— Ministry of Labour. *Report on the work of advisory committees for juvenile employment during the year 1928.* London, 1929. 82 pp.

Reviewed in this issue.

— — *Summary of unemployment insurance acts, 1920-1930.* London, 1930. 20 pp.

INDIA.—Department of Commercial Intelligence and Statistics. *Statistical abstract for British India, with statistics, where available, relating to certain Indian States, from 1918-19 to 1927-28.* Calcutta, 1930. 743 pp.

INTERNATIONAL LABOR OFFICE.—*International Labor Conference. Twelfth session, Geneva, 1929. Vol. I, Parts 1-3, 1149 pp. Vol. II, 534 pp.*

The first volume contains the proceedings of the conference and the second, the director's report. An account of this session was given in the August, 1929, issue of the Review (pp. 118-119).

— — *Thirteenth session, Geneva, 1929.* 467 pp.

Proceedings of the Thirteenth session. A brief account of the conference was given in the January, 1930, issue of the Review (p. 87).

— *International survey of legal decisions on labor law, 1928. Supplement: United States and index.* Geneva, 1929. xvi, 70 pp.

JAPAN.—Department of Commerce and Industry. Bureau of Statistics. *Statistics of the Department of Commerce and Industry, 1928.* [Tokyo], 1930. 126 pp.

The 5 sections of this report deal, respectively, with the manufacturing industry, the mining industry, commerce, patents, and commercial and industrial associations.

LEAGUE OF NATIONS.—Organization d'Hygiène. *Rapport sur la protection des aveugles dans différents pays.* Geneva, 1929. 320 pp.

This report covers the provisions for the care of the blind in 27 countries, including the vocational and other education facilities provided; opportunities for employment, such as special workshops, home work, and the development of new occupations; wages; and the causes and methods of prevention of blindness.

NETHERLANDS.—Centraal Bureau voor de Statistiek. *Jaarcijfers voor Nederland, 1929.* The Hague, 1930. xiii, 413 pp.

Contains statistical information in regard to the Netherlands for 1929, including labor inspection, strikes, lockouts, employment service, wages, hours of labor, employment and unemployment, public health and welfare work, cooperative societies of various types, public insurance against industrial hazards, etc.

NEW ZEALAND.—Committee on Unemployment. *Unemployment in New Zealand.* Wellington, 1929, 34 pp.; 1930, 36 pp.

Reviewed in this issue.

ONTARIO (CANADA).—Minimum Wage Board. *Ninth annual report, 1929.* Toronto, 1930. 40 pp.

The report contains a comparison of wages for various industries, showing rates before the minimum wage orders went into effect in contrast with those for 1929. In 1929 the board collected \$1,349.47 in arrears of wages due workers.

RUMANIA.—Ministerul Muncii, Sănătății și Ocrotirilor Sociale. *Zece Ani de Politică Socială în România 1920-1930.* Bucharest, 1930. 278 pp.

Contains a historical review of the activities of the Ministry of Labor in Rumania during the decade of 1920-1930, including a history of the organization of the ministry, legislation concerning the ministry, and its activities in

connection with the labor market, education and protection of labor, social welfare work, and consumers' cooperation.

**SASKATCHEWAN (CANADA).**—Department of Railways, Labor, and Industries. *First annual report, for the 12 months ended April 30, 1929. Regina, 1929. 89 pp.*

In addition to data on natural resources, railways, manufacturing, and building construction, the publication contains statistics on minimum wages, the activities of the employment service, immigration, accidents, strikes and lockouts, and labor legislation.

**SCOTLAND.**—Department of Health. *First annual report, 1929. Edinburgh, 1930. 219 pp. (Cmd. 3529.)*

In 1928 an act was passed for the reorganization of offices in Scotland under the terms of which the Scottish Board of Health passed out of existence and was succeeded on January 1, 1929, by the Department of Health for Scotland. Some of the material presented in the first annual report of the new department on the subjects of State-assisted housing, and widows', orphans', and old-age pensions is summarized in this issue.

**SOUTH AUSTRALIA.**—Statistical Department. *Statistical register for the year 1928-29. Part V.—Production: Section 1.—Report on agricultural, livestock, and manufactory statistics, year 1928-29. Adelaide, 1930. 31 pp.*

**VIENNA (AUSTRIA).**—KAMMER FÜR ARBEITER UND ANGESTELLTE. *Die sozialpolitische Gesetzgebung in Österreich, Band V, Heft 1: Betriebsrätegesetz. Vienna, 1929. 215 pp.*

Contains the law relating to the Industrial Council in Austria, with certain interpretative remarks by Dr. Em. Adler.

**WESTERN AUSTRALIA.**—Government Statistician. *Pocket yearbook of Western Australia, 1930. Perth, 1930. 108 pp.*

Includes data relating to retail prices, wages, employment, trade-unions, old-age and invalid pensions, emigration and immigration.

—Registrar of Friendly Societies. *Report of proceedings for the year ended June 30, 1929. Perth, 1930. 20 pp.*

On June 30, 1929, the membership of the registered societies stood at 24,491, an increase of 982 over the preceding year. The period for which sickness benefits were paid rose from 36,189 to 37,604 weeks, the increase of 1,415 weeks being ascribed mainly to the increase in membership, although a slightly larger proportion of the membership made claims—20.83 per cent, which exceeded the proportion for 1927-28 by 0.74 per cent. The mortality claims showed a substantial reduction, being 147 against 188 in the preceding year. Finances were in a satisfactory condition. The total funds at the date of the report amounted to £439,242 (\$2,137,571), an increase of nearly £16,000 (\$77,864) over the amount on hand at the end of 1927-28.

### Unofficial

**ACTUARIAL SOCIETY OF AMERICA AND THE ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS.** *Joint occupation study, 1928. New York, 1929. 191 pp.*

Presents an analysis of the rate of occupational mortality and the causes of death, based on the experience of 12 large insurance companies which carry three-fifths of the total insurance in the United States and Canada. The study was made necessary because of the great changes in industrial life since the medico-actuarial mortality investigation of 1913. It covers the period of 1920 to 1926 for occupations involving accidental hazards as the principal cause of extra mortality, and the period of 1915 to 1926 for all other occupations. Detail tables are shown for occupations, according to the 1926 Code, as well as basic tables of mortality for the two periods.



AMERICAN MEDICAL ASSOCIATION. Council on Medical Education and Hospitals. *Hospital service in the United States, 1930. Reprinted from the Journal of the American Medical Association, Chicago, March 29, 1930, pp. 903-1000.*

The report consists of several articles relating to different phases of hospital management as well as various statistical reports regarding the number of hospitals, types of services rendered, etc., and includes a list of the registered hospitals.

AMULREE, Lord. *Industrial arbitration in Great Britain. London, Oxford University Press, 1929. 233 pp., illus.*

The author who, as Sir William MacKenzie, was first president of the industrial court, traces the development of wage regulation through the Middle Ages, the repeal of the earlier legislation and the laissez-faire period, and the reintroduction of State regulation in more modern times. The voluntary conciliation machinery of the last part of the nineteenth century and the early part of the twentieth is dealt with fully, and considerable space is given to the complicated methods of the war period. The Whitley movement, the trade boards, and the industrial court are discussed in detail, and appendixes give various acts of Parliament and other documents dealing with the subject.

BENT, SILAS. *Machine made man. New York, Farrar and Rinehart, 1930. 341 pp.; illus.*

BOSTON ELEVATED RAILWAY. *Safety on the "El." Boston, 1930. 190 pp.; charts, illus.*

This account of accident reduction on the Boston Elevated Railway was prepared in competition for the Anthony N. Brady Memorial Medal, which it was awarded for its safety record during 1928. The volume describes the measures adopted by the railway to reduce accidents and the degree of success achieved, including an account of the development of cooperation between management and employees.

BOWERS, EDISON L. *Is it safe to work? A study of industrial accidents. Boston, Houghton Mifflin Co., 1930. 229 pp.; charts.*

Reviewed briefly in this issue.

CHAMBER OF COMMERCE OF THE UNITED STATES. Department of Manufacture. *Balancing production and employment through management control. Washington, March, 1930. 62 pp.; charts.*

CONSUMERS' LEAGUE OF CINCINNATI. *What girls live on—and how: A study of the expenditures of a sample group of girls employed in Cincinnati in 1929, by Frances R. Whitney. Cincinnati, 1024 Provident Bank Building, 1930. 52 pp.*

DERSCH, HERMANN, AND OTHERS. *Die Rechtsprechung des Reichsgerichts zum Arbeitsrecht. II. Band: Das kollektive Arbeitsrecht und das Arbeitsvertragsrecht von 1926-1928. Mannheim, J. Bensheimer, 1929. 264 pp.*

Contains a review of the jurisdiction of the State courts in regard to the labor laws in Germany, with special reference to the laws relating to trade agreements and other collective rights of labor.

DEUTSCHE GESELLSCHAFT FÜR GEWERBEHYGIENE. *Beihefte zum Zentralblatt für Gewerbehygiene und Unfallverhütung, Nr. 17: Therapie gewerblicher Berufskrankheiten. Teil I: Die Therapie der gewerblichen Hautschädigungen; Die Therapie der gewerblichen Vergiftungen durch Ätze; Die Therapie der gewerblichen Kohlenoxydvergiftung. Berlin, 1930. 70 pp.*

Deals with the therapy of industrial skin diseases, industrial poisoning from ammonia fumes, and industrial carbon-monoxide poisoning.

— *Schriften aus dem Gesamtgebiet der Gewerbehygiene. Neue Folge. Heft 12: Theophrastus von Hohenheim genannt Paracelsus—von der Bergsucht und anderen Bergkrankheiten. Berlin, 1925. 69 pp.*

A review of the works of Paracelsus (1493-1541) relating to the "diseases of miners." Contains a photograph of Paracelsus and a short bibliography.



DEUTSCHE GESELLSCHAFT FÜR GEWERBEHYGIENE. *Schriften aus dem Gesamtgebiet der Gewerbehygiene. Neue Folge. Heft 13. Über die Gesundheitsgefährdung bei der Verarbeitung von metallischem Blei mit besonderer Berücksichtigung der Bleilötlerei, von Dr. med. Hans Engel. Berlin, 1925. 40 pp.*

Deals with health hazards in working with metallic lead, especially soldering.

— — — — *Heft 14. Was muss der Arzt von der neuen Verordnung über die Einbeziehung der Berufskrankheiten in die Unfallversicherung wissen und welche Pflichten ergeben sich für ihn daraus? Berlin, 1925. 72 pp., illus.*

Discusses duties and qualifications of physicians under the new regulations governing insurance for occupational injuries.

— — — — *Heft 15. Die deutsche Fabrikpflegerin, von Dr. Ludwig Schmidt-Kehl. Berlin, 1926. 31 pp.*

Deals with the duties of factory welfare workers in Germany, including work among families.

— — — — *Heft 16: Gewerbestaub und Lungentuberkulose. Eine literarische und experimentelle Studie von Dr. med. K. W. Jötten und Dr. med. W. Arnoldi. Berlin, 1927. 256 pp., illus.*

Study of various industrial dust hazards in their relation to pulmonary tuberculosis, including a bibliography.

— — — — *Heft 17: Die Staublungenerkrankung (Pneumonokoniose) der Sandsteinarbeiter, von Prof. Dr. A. Thiele und Dr. E. Saupe. Berlin, 1927. 65 pp., illus.*

Deals with lung diseases caused by dust (pneumoconiosis) among sandstone workers, and contains a short bibliography.

— — — — *Heft 19: Ergographische Studien über die Funktion der Handstrecker bei Arbeitern verschiedener Bleigefährdung, von Dr. med. Carl E. Albrecht. Berlin, 1928. 62 pp.; charts, illus.*

Ergographic studies of muscular contractions of hands of workers exposed to various lead hazards; includes a bibliography.

— — — — *Heft 20: Gewerbliche Augenschädigungen und ihre Verhütung, von Dr. med. O. Thies. Berlin, 1928. 43 pp., illus.*

Discusses industrial eye injuries and their prevention.

— — — — *Heft 21. Das Sandstrahlgebläse. Berlin, 1928. 46 pp.; diagrams, illus.*

Describes various systems of exhaust ventilation used in sand-blasting.

— — — — *Heft 22: Die Aschebeseitigung in Grosskesselanlagen. Berlin, 1928. 46 pp., diagrams.*

Deals with hazards from ash collections from large steam boilers.

— — — — *Heft 23: Das Tiefdruckverfahren. Berlin, 1929. 30 pp.; diagrams, illus.*

Study of the rotogravure printing process and the hazards, principally from the inks and solvents used.

— — — — *Heft 24: Internationale Übersicht über Gewerbekrankheiten nach den Berichten der Gewerbeaufsichtsbehörden der Kulturländer über die Jahre 1920 bis 1926. Berlin, 1929. 205 pp.*

An international report on industrial diseases, based upon the reports of factory inspection offices of the most important industrial countries during the years 1920-1926.

— — — — *Heft 25: Über die Gesundheitsverhältnisse der Arbeiter in der deutschen keramischen insbesondere der Porzellan-Industrie mit besonderer Berücksichtigung der Tuberkulosefrage, von Prof. Dr. K. B. Lehmann. Berlin, 1929. 55 pp.*

Deals with the health conditions of workers in German ceramic industries, especially the porcelain industry, with particular reference to the incidence of tuberculosis.

DUBLIN, LOUIS I., and LOTKA, ALFRED J. *The money value of a man.* New York, Ronald Press Co., 1930. 264 pp.; charts.

In this volume the authors' purpose is to estimate the money value of a wage earner at different periods of life and for different income classes in order to establish a measure of the loss to his family and to the economic system of such a man if he is removed by death.

HANDELINGEN VAN HET A. V. O. CONGRESS. *Amsterdam, 8-12 October, 1928.* Amsterdam, 1929. 356 pp.

A report on the proceedings of the social welfare work congress held October 8-12, 1928, at Amsterdam. Among the topics discussed were: Legislation related to social welfare work in various countries, care for war invalids, employment service, labor inspection, tuberculosis, care for the blind, physical invalids, etc.

HEDGES, R. Y., and WINTERBOTTOM, ALLAN. *The legal history of trade-unionism.* London, Longmans, Green & Co., 1930. 170 pp.

Deals with the legal regulation of trade-unions, and of workmen's combinations before their efforts at associated action took form in unionism, from its beginnings down to the present day, dwelling especially upon modern legislation from the trade-union act of 1871 down to and including the act of 1927.

HOFMANN, WILHELM. *Das Arbeitsrecht im Saargebiet.* Saarbrücken, 1928. 152 pp.

Contains a review of labor laws in force in the Saar District, covering employment, trade agreements, dismissal, organizations of employers and of workers, conciliation of industrial disputes, etc.

HUMPHREY, A. W. *The worker's share: A study in wages and poverty.* London, George Allen & Unwin (Ltd.), 1930. 92 pp.

The author's thesis is that, as shown by the studies of such statisticians as Bowley, Stamp, and Giffen, the national wealth and national income of Great Britain have, during modern times, increased far more rapidly than its population, but that for the mass of people there has been no increase of well-being at all commensurate with this improvement in the national finances. In other words, the workers, who constitute the largest group of the population, have not received their share of the expanding national possessions.

JAHRBUCH DES ARBEITSRECHTS. *Band X, 1929.* Mannheim, J. Bensheimer, 1930. 430 pp.

Contains a systematic review of labor laws and their application and working in Austria during the year 1929, including those related to court procedure, welfare work, labor hours, wages, employment service, unemployment insurance, etc.

KASKEL, WALTER. *Die Arbeitsgerichtsbarkeit.* Berlin, Julius Springer, 1929. 360 pp.

Deals with labor legislation, labor courts, and court proceedings in Germany.

KOBAYASHI, USHISABURO. *The basic industries and social history of Japan, 1914-1918.* New Haven, Yale University Press, 1930. 280 pp.

One of the volumes in the Japanese series on "The Economic and Social History of the World War," which is being prepared under the auspices of the Carnegie Endowment for International Peace.

KUCZYNSKI, JÜRGEN UND MARGUERITE. *Der Fabrikarbeiter in der amerikanischen Wirtschaft.* Leipzig, C. L. Hirschfeld, 1929. 269 pp.

Contains an analytical review of the conditions of industrial workers in the United States, including wages, purchasing power of wages, employment, hours of work, productivity, social welfare work, economic policy of the American Federation of Labor, women in industry, child labor, labor protection, etc.

MAZZITELLI, DOTT. MICHELE. *La lavorazione del marmo nelle cave e negli opifici di Carrara.* 64 pp.; illus. (Estratto dallo "Studium," Naples, anno XIX, N. 11-12, 1929.)

A study of the quarries of Carrara to determine the effects of the inhalation of marble dust. Deals also with incidental pulmonary affections.

MUSSEY, HENRY RAYMOND. *Unemployment: A practical program.* New York, League for Independent Political Action, 52 Vanderbilt Avenue, 1930. 12 pp.

NATIONAL BUREAU OF ECONOMIC RESEARCH (INC.). *Publication No. 15: The national income and its purchasing power, by Willford Isbell King.* New York, 51 Madison Avenue, 1930. 394 pp.; charts.

NATIONAL CONFERENCE OF CATHOLIC CHARITIES. *Proceedings of fifteenth session, New Orleans, La., November 10-14, 1929.* Washington, Vermont Bldg., 1930. 253 pp.

Among the conference papers more directly touching upon labor problems are those entitled "Family allowance systems," "Wages and family limitation," "A study of the shop committee," and "The Mexicans in our midst."

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *The cost of living in the United States, 1914-1929.* New York, 247 Park Avenue, 1930. 190 pp.; charts.

— *A picture of world economic conditions at the beginning of 1930.* New York, 247 Park Avenue, 1930. 196 pp.

NATIONAL SAFETY COUNCIL. *Transactions Eighteenth Annual Safety Congress, Chicago, September 30 to October 4, 1929.* Chicago, 1929. Vol. I, 1011 pp. illus.; Vol. II, 1121 pp., charts, illus.; Vol. III, 325 pp., charts, illus.; General sessions, 264 pp., charts.

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